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RUSSELL ERRETT, Editor.

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VOL. XIII. PITTSBURGH, TUESDAY MORNING, FEBRUARY 8, 1876. NO. 131.

FIRST EDITION.

HARRISBURG.

PENNSYLVANIA LEGISLATURE.

Agreement on the Finance Bill.

It Will Pass Both Houses To-day.

Petition of Pittsburgh Citizens Against More City Bonds.

House Passes Resolution for Repeal of Bankrupt Law.

Special Dispatch to the Commercial.

HARRISBURG, PA., February 7, 1876.

SENATE.

The Senate met at 8 P. M., the Lieutenant Governor in the chair.

Bills on First Reading.—Concurrent resolution requesting Senators and members of Congress to vote for an act equalizing bounties to soldiers, sailors and marines in the late rebellion; also to vote for the repeal of the Bankrupt act.

Mr. Strang, from the Conference Committee, made the following report:

"The undersigned Committee, appointed to consider the differences existing between the two Houses on House bill No. 14, entitled: "An act" &c., respectfully report that they recommend that the House recede from its non-concurrence in section 2, with the following additional amendment: Insert in line 8, section 2, after the word "interest," the words "or other consideration;" insert in line 9, section 2, after the word "account," the words "to the Auditor General;" that the House recede from its non-concurrence in the Senate amendments to section 3, with the following additional amendment: Insert in line 3, section 3, after the word "October," the words "the each and every year;" and that the House recede from its non-concurrence in the Senate amendment inserting section four."

The above report was unanimously agreed to by the Committee of Conference, and the bill, as amended, ordered to be printed. It will finally pass both Houses to-morrow.

Adjourned.

HOUSE.

The House met at 7:30 P. M.

The rules was suspended and the following bill passed third reading: Supplementary act prescribing the manner in which courts may divide boroughs into wards—Yeas 132, nays 1.

Letters, petitions, memorials &c., were read and properly referred.

Mr. Carson presented the following petition against the issue of more Pittsburgh bonds.

"The undersigned, property owners in Pittsburgh, respectfully protest and object against the issue of any more municipal bonds or the increase of the city debt, for the following reasons: First, because our municipal taxation has been made oppressive, the value of our property depressed and the city's property seriously impaired by the already immense increase of the city debt, and we are well aware that the loans will be spent, as in in the past, regardless of the city purposes to-day. Second, because the city, as is well-known, has already exceeded the constitutional limit of indebtedness. The courts on this ground now refuse to approve her bonds for street-opening and the like, without sureties. The Legislature, therefore, cannot make valid her bonds for additional loans, and any attempt to sell them would be a fraud on the purchasers, as well as on the taxpayers, and render it necessary for us to advertise the public against them in the property market."

[Signed] "James Kelly, John Dunlap, Alexander King, Wm. McCully & Co., J. H. Shoenberger, James Laughlin, D. A. Stewart, Hussey, Howe & Co., Russell & Co., B. L. Fahnestock, and many others.

Mr. Large—Petition of citizens of West Elizabeth praying for the passage of the bituminous ventilation bill.

Concurrent resolution asking Senators and members of Congress to vote for an act equalizing the bounties of soldiers, sailors and marines in the late rebellion.

Mr. Irwin again called up the resolution for the repeal of the Bankrupt law.

Mr. Christy opposed the passage of the resolution.

The yeas and nays were called, and the resolution passed—yeas 96, nays 34.

Reports from Committees—Mr. Hays—Act relating to boarding-house keepers, authorizing the attaching of wages for boarding, not exceeding four weeks. Affirmatively.

Act relating to Sheriff's sales of real estate. Negatively.

Mr. Zern—Act enlarging the jurisdiction of aldermen of cities of the second and third class. This bill gives aldermen enlarged powers and jurisdiction in all cases within three hundred dollars, in Pittsburgh and Allegheny city.

Mr. Christy—Act making appropriations for the payment of printing, stationary and necessary expenses incurred by the Commissioners appointed by the Governor to examine the question of the improvement of the Ohio river.

Act making an appropriation to the Allegheny County Society for Alleviating the Miseries of Public Prisoners.

Act relating to the compensation of county treasurers.

Mr. Henry, of Erie, read in place a supplement to the Wallace act, extending the term of Select Councilmen, in cities of the third class, from two to three years.

The Conference Committee on House bill No. 14, relating to the Sinking Fund, was read in the House and ordered to be printed. The report is the same made in the Senate. The bill will pass the House undoubtedly to-morrow and become a law, when members will receive their salary, and the State institutions their respective appropriations.

A large number of bills passed first reading, after which the House adjourned.

FIRE RECORD.

Lansing, Mich.—$18,000.

LANSING, February 7.—The Mineral Springs Hotel here was burned Saturday night. Loss $18,000; insurance $12,000.

Disastrous Prairie Fires.

KANSAS CITY, February 7.—A disastrous prairie fire was started four miles southwest of Brookville, on the line of the Kansas and Pacific Railroad. The wind blowing a perfect gale, the fire swept a large space of country, and many houses and twenty barns of farmers were destroyed; also $15,000 worth of grain in sack. There was great excitement among the settlers.

Rockton, Ills.—$70,000.

CHICAGO, February 7.—A fire on Saturday night destroyed the paper mills of Bradner, Smith & Co., situated at Rockton, Ill. Loss, $70,000; insurance, $25,000 to $30,000. This firm do business in Chicago.

New York—$150,000.

NEW YORK, February 7.—Late last night a fire broke out in Frank Rhoney's furniture establishment, Nos. 82 and 84 Bowery, and in a short time the wall of No. 84 fell on the roof of Nos. 86 and 88, crushing it in, and setting fire to the building, which, with Nos. 82 and 84, were destroyed, and No. 80 was much damaged, causing a loss estimated at $150,000; insurance about fifty per cent. Rhoney's loss is $45,000; insurance, $33,000; loss on buildings, $50,000. The remainder of the loss is distributed among a number of occupants.

Ohio Brewery Burned.

CINCINNATI, February 7.—The *Commercial's* Massillon, O., special says: Peter Rich's brewery, at Russell station on the Tuscarawas Valley Railroad, was burned 2ist night. The loss is estimated at $16,000; insurance at $6,000.

TELEGRAPHIC PERSONALS.

A dispatch from London announces the death of Viscount Galway.

W. T. Berry & Co., bookseilers of Nashville, made an assignment yesterday.

Samuel D. McAllister, a prominent cotton merchant of Nashville, died yesterday.

Admiral Stringham, United S ates Navy, died in Brooklyn yesterday, aged seventy-eight years.

The President has recognized Frederick Ferdinand Myhlertz as Vice Consul of Denmark at Philadelphia.

It is reported that J. & G. Henderson & Co., grain merchants, of Liverpool, have suspended. Their liabilities are placed at $1,500,000. Their assets are good.

Samuel Boyd, Deputy United States Marshal at Brownsville, Tenn., was shot and killed last Saturday, by H. M. Clark, editor of the Brownsville *Democrat*.

Hon. W. H. Phelps, a member of the Missouri Legislature, and his brother, a young man twenty years of age, were arrested at Springfield, Mo., yesterday, charged with assassinating J. F. Harding on the street, in Springfield, a few days ago.

Hon. Luther C. Peck, of Nunda, N. Y., died in that place Saturday morning last. Mr. Peck was born in Connecticut but went to Pennsylvania and lived in Pike and Allegheny counties. Subsequently he removed to new York, and became prominent in politics in the Southern Tier. From 1837 to 1841 he represented the Twentieth New York district in Congress,

XLIV. CONGRESS.

FIRST SESSION.

WASHINGTON, D. C., February 7, 1875.

SENATE.

The CHAIR laid before the Senate the memorial from the New York Board of Trade demonstrating the inexpediency of attempting a resumption of specie payments before the requisite conditions are ripe for it.

Mr. MORRILL gave notice that after the morning hour to-morrow he would ask the Senate to take up and consider the House bill appropriating $1,500,000 to aid in the Centennial celebration. He hoped whatever the Senate proposed to do would be done then.

Mr. CONKLING, from the Judiciary Committee, reported with verbal amendments the House bill providing for the payment of judgments rendered by the Court of Alabama claims.

Mr. SARGENT moved to make the rate of interest on such judgments six per cent. per annum, instead of four per cent., but after some discussion he withdrew the amendment, but gave notice that he would offer it hereafter to some other bill relating to the Alabama court.

The amendments proposed by the committee were concurred in and the bill passed.

The CHAIR laid before the Senate a communication from the Secretary of the Treasury in response to the Senate resolution of January 26, inclosing a communication from Sidney Dillon, President of the Union Pacific Railroad, and C. P. Huntington, Vice President of the Central Pacific Railroad Company, in regard to the creation of a sinking fund for the payment of the amounts due the Government by said companies.

Mr. WEST moved that the communication be printed and laid on the table. So ordered. He gave notice that at an early day he would call it up and submit some remarks in regard to the pecuniary and other relations existing between the Government and the Pacific railroads.

Mr. SHERMAN entered a motion to refer this communication to the Committee on Finance. He said he had an objection to the matter being printed and laid on the table now, and that the Senator from Louisiana [West] might submit his remarks.

Mr. WEST gave notice that he would move to have the matter referred to the Committee on Railroads.

Mr. LOGAN, from the Committee on Military Affairs, reported adversely on the resolutions of the West Virginia Legislature, asking an appropriation for the improvement of turnpike and the erection of a monument common native of the battle of Point Pleasant, and the committee was discharged from their further consideration.

After the expiration of the morning hour, the Senate resumed consideration of the resolution for the admission of P. B. S. Pinchback as Senator from Louisiana.

Mr. THURMAN said there was but one thing upon which the question turned, and that was whether the body of men which assembled to elect Pinchback was the lawful Legislature of Louisiana, or not. If they did compose the lawful Legislature then Pinchback was entitled to a seat; if they did not, then he could not be admitted. He then referred to the history of the Legislature of Louisiana and said the question now before the Senate was for the Senate to decide, and no decision of any court, not even the Supreme Court of the United States, should have any influence in the matter, the Senate being the exclusive judge of the election and qualifications of its own members. In conclusion, he said he did not see how changing the circumstances in Louisiana would change legal opinion. Were Senators to listen to an appeal to choose between a Republican and a Democrat, as if they were sitting as electors? If senators would stand by their conscience, which induced them to vote for the Carpenter bill, he would promise them that there would be a result which would be in accordance with the dignity of the Senate.

Mr. CHRISTIANCY spoke against the admission of Mr. Pinchback. Mr. HOWE in favor.

Pending discussion, the Senate went into executive session, and, when the doors was reopened, adjourned.

HOUSE.

Bills were introduced as follows:

By Mr. FORT—Declaring the birthday of Abraham Lincoln a national holiday, to be kept on the 14th of April the national flag shall float at half mast.

By Mr. BLAND—To substitute legal tender notes for national bank notes, and to make the duties on imports receivable in one-half in legal tender notes, and to repeal the resumption act of the 14th of January, 1875.

Mr. KASSON moved to suspend the rules so that the House may proceed to vote separately on the following two resolutions:

Resolved, That the constitutional authority of Congress to coin money and to regulate the value thereof and of foreign coin, does not include authority to issue the paper of the Government as money, and in the judgment of the House the Constitution does not confer on Congress power to issue, in time of peace, the promises or obligations of the Government as legal tender in payment of debts.

Resolved, That any legislation touching the legal tender currency of the United States should keep steadily in view the resumption of specie payment, and should tend to enhance the value of that currency, for the redemption of which the faith of the United States has been pledged to its citizens.

Mr. COX, of New York—That is a very important subject. We ought to have a word to say about it.

Mr. HOLMAN—The proposition ought to be divided.

The SPEAKER—The gentleman from Iowa proposes that it shall be divided.

Mr. COX—I hope it will be referred to the Committee on Banking and Currency.

Mr. FORT—The House ought to have the opinion of the Judiciary Committee.

Mr. KASSON—I must object to debate.

The SPEAKER—If I understand the proposition, it is not a vote on the merits of the question but only a vote on the motion to suspend the rules.

Mr. KASSON—If the vote be on the negative it will be a rejection of the resolutions.

Mr. RANDALL—Not a bit of it.

The rules were not suspended—yeas 98, nays 140, and the resolutions were not before the House.

Mr. COX suggested to Mr. Kasson to have the resolutions referred either to the Committee on Ways and Means or to the Banking Committee.

Mr. KASSON said he should be very glad to have them so referred.

The matter went over without further action, and Mr. BUCKNEY, from the Judiciary Committee, brought in a report on the amendments to the bill to pay interest on the 3-65 bonds or the District of Columbia, with the recommendation that they be non-concurred in and that they be referred to a conference committee. He made that motion and it was agreed to. The Speaker appointed Messrs. Buckner, Cate and Willard, of Michigan, conferees on the part of the House.

Mr. McCRARY was, at his own request, excused from further service on the Committee for the District of Columbia, and Mr. Crapo was appointed in his place.

Mr. Hoar was appointed to fill the vacancy on the Judiciary Committee, caused by the death of Mr. Starkweather, and was excused from further service on the Committee on Elections, and Mr. Townsend, of New York, was appointed to fill the vacancy on the Committee on Elections.

Mr. PIERCE offered a resolution instructing the Committee on Foreign Affairs to ascertain and report what action, if any, has been taken by the Executive Department of the Government in relation to the connection of the United States Minister at the Court of St. James with the directory of the so-called Emma mine and with the Spanish claims of the Maicho claims. Adopted.

The House then went into Committee of the Whole, Mr. Hoskins in the chair, on the Consular and Diplomatic Appropriation bill, and was addressed by Mr. Holman on the necessity of economy in public expenditures. In reply to Mr. Monroe's argument last week adverse to the suppression of the mission to Greece, he ridiculed the idea of attributing any political importance to modern Greece. He proceeded to speak at length against the description given by the Minister of Greece of the religious ceremony on Easter, in which the King is mentioned as wearing the uniform or a general officer, with a ribbon of his royal order on his breast, and the Queen wearing white satin robes, which "seemed to steal the color from her cheeks." [A laugh by Mr. Monroe.] His friend [Monroe] should not indulge in such levity. This was a State paper that he was reading from, containing special dispatches sent to the State Department at all expense to the people.

Mr. MONROE said that if his friends inferred that because there were officials who lacked good sense, therefore should be abolished, by the same reasoning (if half of what the newspapers said were believed) Congress itself ought to be abolished.

Mr. HOLMAN continued his criticism of state papers, including a dispatch from Mr. Bingham, Minister to Austria, descriptive of his reception by the Emperor and Empress, and summed up by declaring that this whole train of diplomacy was a sham and an obsolete institution. The only exception he made was in the case of Mr. Washburne, Minister to France, who, he said, had rendered important service to mankind in the late Franco-German war.

Mr. GARFIELD said he sympathized with the Committee on Appropriations in its laudable endeavors to cut down expenditures. There were several places where expenses might be reduced, such as fortifications, public buildings, &c., but he had been a little surprised to find the reductions proposed in this bill, because every intelligent man would admit that the foreign service of the Government, both at home and abroad, had been for years the most economically conducted, the most honestly managed and the most carefully kept up of any department of the Government. He alluded to the fact that from 1803 to 1855 there had been no change in the salaries of ministers to any country in the world, and some of the consuls abroad, in the way of salary, ouths and thefts, as high as $2,000 a year. Congress had considered the whole subject with great care, and had fixed the rates of compensation for diplomatic service abroad, making the salaries of first class missions $17,500 a year. That had been considered a fair, reasonable compensation, considering the cost of living at that time, and although within the last few years the cost of living had diminished everywhere and in some countries more than doubled, it was now proposed in this bill to cut down those salaries twenty per cent. If the object was to fix it so that only rich men could hold these offices, and to shut out poor men, let Congress do it with its eyes open. He did not care very much about many of the missions that were proposed to be abolished. Perhaps some of them could be abolished without damage, but he should regard as a great calamity the abolition of the South American mission. In no part of the world had the United States so much right and so great a duty to be chief in the council of international affairs, as in South America on the one hand and in Japan and China on the other, and by a strange sort of fortuity on the part of the Committee on Appropriations, it was in these countries that our foreign relations were to be chiefly crippled. He would rather have five of the ex-Emperor's missions cut out than those of the South American Republics, our neighbors and friends. He besought the gentleman to strike somewhere else than at the South American Republics.

Mr. RANDALL—We strike all around.

Mr. GARFIELD passed on to criticise the abolition of consulate, consular agencies and other consular offices, making forty-four in all, the chief ground of doing so being that there was not enough business transacted at them from these consulates to justify the payment of consular salaries, and he contrasted with this economy the liberality of England, who, receiving but $6,000 in fees from her consulates at seaport ports, paid out to her consuls more than $81,250 a year. Was the same in regard to China and Japan. The total outlay of the United States for the Japanese mission and consulates was $23,498 over and above receipts, while that of England for the same service was $27,497. The total outlay of the United States in China over and above receipts, was $29,650, while that of Great Britain was $38,697. He begged the House not to cripple and utterly ruin the young and growing commerce that should bind Asia to the United States. He criticised the details of the bill in other matters, particularly the reduction by one-half of the allowances for the expense of sending back United States sailors from foreign ports, and showed that the effect of the reduced appropriation would be, not a saving, for the expenses would have to be paid, but a sending to protest drafts drawn by Consuls.

At the close of Mr. Garfield's speech the committee rose. The Senate amendment to the bill to provide for the payment of judgments rendered by the Alabama Court of Claims were concurred in.

Adjourned.

FOREIGN NEWS.

BY THE ATLANTIC CABLE.

Spain.

GOVERNMENT INFLUENCE IN THE LATE ELECTIONS.

LONDON, February 7.—The *Times* publishes a letter from Saville this morning, which contains the following details of the recent election in Spain for members of the new Cortes: "The frauds and intimidation practiced by the Government conduct of the elections have done more to destroy confidence and promote discord in the Provinces than can possibly be estimated. Not only was wholesale bribery practiced, but voting papers were forged by thousands. In one town in Andalusia, the Liberals presented a protest, whereupon five or six persons were immediately imprisoned. Men of war were sent to seaports of known Liberal proclivities, and carbineers and armed police in other places hindered voters. In some districts voting licenses were only given to known partisans of the Ministry."

FURTHER ALFONSIST SUCCESSES.

MADRID, February 7.—Official dispatches announce that General Quesada has driven the Carlists from Abadino, near Durango, after a sharp engagement. Seventy more Carlists have submitted in Navarre.

England.

CARDINAL MANNING AND THE ENGLISH REFUGEES.

LONDON, February 7.—Cardinal Manning writes to the *Times* to-day, stating that the telegrams from Rome that he intends to proceed thither to promote the union of a portion of the English ritualistic clergy with the Roman Catholic Church, and that he had made proposals to the Vatican looking to that end, are both, from first to last, wholly devoid of truth. He proceeds as follows: "No scheme whatever on the subject of ritualism has ever been considered by me. None has ever been, to my knowledge, proposed or opposed or demanded at Rome."

THE QUEEN'S NEXT SPEECH FROM THE THRONE—ATTACKS BY THE OPPOSITION.

LONDON, February 8.—The *Times*, in a leading article, says the measures to be announced in the Queen's speech on reopening of Parliament will include the Merchant Shipping bill, a bill extending a new system of judicature to Ireland and the reconsideration of the Scotch law in operation in England where the question of the appellate jurisdiction of the House of Lords is still undecided. A royal commission will be promised to inquire into the Fenian slave question. Among the other subjects to be mentioned, is England's relations with China. There has been a chance of war with China, which may not have entirely disappeared. Her Majesty will announce the happy end of the Malay war. Burmah will also be alluded to. The most important part of the speech will refer to Eastern affairs. The intimation of continued friendship with foreign powers will doubtless be given. Parliament and in these days it would be too much to say that such unbroken concord is a matter of course.

It is said that the Opposition intend to propose a specific resolution censuring the purchase of the Suez Canal shares, not as an amendment to the address, but in a separate form, so that a direct parliamentary onslaught is expected to be made on the Government for that transaction. The Government will also be severely censured by the Opposition for the Fugitive Slave circular. The *Daily Telegraph* says Gladstone will not participate in the debate on the address.

Germany.

TEMPER OF THE GOVERNMENT ON CUBAN AFFAIRS.

LONDON, February 8.—A special from Berlin says the report that Germany has declined to make any representations to Spain in regard to the Virginius affair. The German Government has not received any communication of the United States which required or invited an answer, but there is no valve in the belief that the Government is not unwilling to impress upon Spain the justice of American complaints and the advisability of making some redress.

Italy.

MEETING OF THE BRITISH BIBLE SOCIETY —GARIBALDI PROPOSES TO CREMATE A FRIEND.

LONDON, February 8.—A dispatch from Rome to the *News* says the inaugural meeting of the British and Foreign Bible Society was held yesterday, at the Waldensian church, on the Via Condatti. English, Scotch, and American Protestants were present.

Cuneo, an old friend of Garibaldi, recently died in Florence without receiving extreme unction. The clergy have consequently refused the remains Christian burial. Garibaldi writes to a friend advising cremation.

Austria.

NEWSPAPER CORRESPONDENT EXILED FOR INDISCRETIONS.

LONDON, February 7.—The *Times* Berlin special says Dr. Levyshon, an eminent Prussian journalist and the Vienna correspondent of several German newspapers, notwithstanding the intercession of the German Ambassador and despite Dr. Levyshon's well known moderation, has been expelled from Austria, charged with disseminating intelligence unfavorable to the regime. In a letter to Prince Auersperg, the Austrian Prime Minister, the Doctor charges the Premier with ordering his expulsion merely to prove his indifference to opinion. The press generally at Berlin who have been endeavoring to keep Prince Auersperg in office, the reference being to the article in the semi-official *Provincial Correspondenz* in which apprehensions are stated to be felt for a serious estrangement between Germany and Austria.

Marine News.

MOVILLE, February 7.—Steamship Sarmatian, from Portland, arrived.

WHISKY FRAUDS.

BABCOCK APPEARS AND PLEADS NOT GUILTY—TRIAL TO BEGIN TO-DAY.

ST. LOUIS, February 7.—General O. E. Babcock appeared in the United States Court this morning, to answer to the indictment charging him with complicity in the whisky frauds. He was attended by Judge John K. Porter, of New York; Emory J. Storrs, of Chicago; ex-Attorney General Williams, Judge John M. and Chester H. Krum, of St. Louis, as counsel. His father-in-law, United States Marshal Campbell, for the Northern district of Illinois, and his brother, C. W. Babcock, of Kansas, sat in the court room near him. District Attorney D. P. Dyer and special counsel James O. Broadhead, and Mayor Lucien Eaton, appeared for the Government. It was General Babcock's first appearance in the court since his indictment, and the formality of his plea of not guilty was gone through with. The jurors remaining on the old panel and those specially summoned for this case were called over, but only half of them responded, they having been selected from outside of St. Louis county and some of them not having had time to arrive. Mr. Storrs stated that the counsel for the defense very much needed another day for consultation, and also to await the arrival of very important documentary evidence. The counsel for the Government made no objection to the delay, and after a brief consultation Judge Dillon announced that the case would go over until to-morrow morning, and that at two o'clock P. M. the jurors would be called again that it might be seen who were present. The pressure on the court room was relieved by a strong force of police. Beyond the counsel, the jurors, the witnesses and the members of the press, very few were admitted even to the second floor of the Government building. A crowd of several hundred, however, collected on the outside. Nothing was done in the afternoon session of the court, except to call the jurors. Twenty-seven responded and two or three others will probably be present to-morrow.

NEW YORK.

New York, February 7, 1876.

THOMASSEN'S WIFE AND CHILDREN ARRIVE.

Among the passengers on the steamer Weiland were Mr. Thomassen, wife of the author of the Bremenhaven dynamite disaster, and her four children. She expressed an unwillingness to talk about the cause of her unpleasant prominence, particularly in the presence of her children, who as yet are ignorant of the whole affair. She proposes to seek retirement in her own home in this country.

THE NOE MURDERER SENTENCED.

John Dolan, convicted of the murder of Mr. Noe, was to-day sentenced to be executed. The 28th of March was fixed as the day of the execution, in order to give Dolan's counsel time to prepare points for argument before the Court of Appeals.

FIRST MEETING OF MOODY AND SANKEY.

Notwithstanding the bad condition of the streets, fully nine thousand people attended the revival services of Moody and Sankey, at the Hippodrome this evening. Mr. Sankey sang "Hold the Fort" and other hymns, the choir of one thousand trained voices and the audience joining in the chorus. Mr. Moody preached from the text, "God hath chosen the weak things of the world to confound the strong." He fervently exhorted all to pray for the Spirit of God to quicken them for the good work. He announced a noon prayer meeting for every day. After another hymn the benediction was pronounced. In the smaller hall, Rev. Stephen H. Tyng, Jr., addressed a large audience.

SECOND EDITION.

WASHINGTON.

The Senate in Executive Session.

Animated Debate Between Conkling and Merrimon.

Preparation for the New Hampshire Campaign.

The State Conceded to the Republicans.

Senate Judiciary Committee Favor the Retirement of Judge McCandless.

His Successor to be Congressman Ketchum or Judge Scofield.

No Action Taken on United States Depository at Pittsburgh.

Report of Committee on Texas and Pacific Railroad.

Special Dispatch to the Commercial.

WASHINGTON, D. C., February 7, 1876.

Lively Executive Session of the Senate.

The Executive session of the Senate today considered the nomination of Billings to be United States District Judge of Louisiana. The discussion was exceedingly animated. Mr. Merrimon charged upon the Republicans that they were always caucusing, and that under caucus rule obnoxious persons were confirmed and measures passed. Mr. Conkling replied and, it is intimated, fairly rasped the loquacious tar-heel. He also showed that the Democrats were not only always caucusing, but never did anything, for the reason that their course would not bear fifteen years has been such that they have nothing to stand on which would respond to the patriotic sentiment of the Northern masses.

The New Hampshire Election.

The Republican Executive Committee met to-night to take measures to institute their work in New Hampshire. They will at once forward documents bearing upon the pending political issues and questions. No arrangements have as yet been made with respect to speakers. Advices from New Hampshire say that the Republicans will carry the State by 1,500 majority. The Democratic State Central Committee are making desperate exertions to carry the Legislature, with a view to the election of the millionaire brewer, to the United States Senate, in place of Cragin.

Western Judicial District of Pennsylvania.

The Senate Committee on Judiciary have decided to report favorably on the bill retiring Judge McCandless. It is intimated from an authoritative source that the appointment will not be given to a resident of Pittsburgh, though a number of gentlemen mentioned in these dispatches some days since as considered in that connection, are recognized as fully qualified. It is now understood that the appointment will be given to Representative W. W. Ketchum, of the Luzerne district. Judge Scofield is his chief competitor.

United States Depository at Pittsburgh.

The Committee on Appropriations have taken no decided action on the abolition of the United States Depository at Pittsburgh. In the suggestions of Treasurer New also where reductions could be made, he mentioned this one office which could be dispensed with, and it is quite likely the Committee may so decide, though the Chairman stated to-day that it was not certain.

Texas and Pacific Railroad.

The report of the sub-committee charged with the consideration of the Texas and Pacific Railroad bills, has been completed and will be submitted to the general committee on Wednesday. The report urges Government aid on the ground that the construction of the road is in the interest of the people and of the Government, and will stimulate industry and restore activity in parts of the country where great depression now exists. The bill which accompanies the report provides that bonds executed by the Company shall be deposited with the Secretary of the Treasury, at the rate of $9,000 per mile, payable in gold fifty years after date, at five per cent. interest, in coin, guaranteed by the United States; out of this principal $6,000 per mile to be retained in the Treasury as a security for the payment of the interest as it shall mature; in default of which these bonds can be sold to make it up.

Consolidation of Offices.

The Appropriation Committee to-day considered the practicability of consolidating the Customs and Internal Revenue Bureaus. The feeling was in favor of some measure of this kind, but it was not clear how it could be brought about. The consolidation of the Internal Revenue Districts under the order of the Secretary of the Treasury, has worked excellently and has resulted in a large saving in the number of collectors could be dispensed with.

Secretary Fish Instructs the House Committee on Appropriations in Relation to the Neutrality Act and Mixed Courts.

The Committee on Appropriations addressed a letter, a few days since to the Secretary of State, calling his attention to the estimate of $20,000 for the expenses of the Neutrality act and inquiring what measures had been taken in accordance with the act of March 3, 1869, to terminate the mixed courts between the United States and Great Britain, stipulated for in the treaty of April 7, 1862. The Secretary of State has replied at length and sent his letter to Representative Randall, the Chairman of the Committee. He says:

"This appropriation has been made annually for twenty-five or thirty years and, although generally drawn upon but for a small part of the sum appropriated, is deemed absolutely necessary. During the last fiscal year, none of the appropriation was used, and the preceding year only about five hundred dollars. The existence of the appropriation and the ability to use it may be regarded as a great protection against the acts which the neutrality laws denounce. A object is precautionary, and the information of plottings or movements in contravention of the neutrality laws of the United States, of hostile expeditions fitting out within the United States of unlawful equipments of vessels, and acts tending to compromise the Government in its relations with other powers and to enable the Government to observe its international duties and maintain its good faith toward friendly States. It is drawn upon only when sufficient reason exists to believe that unlawful objects, in derogation of the duties of this Government toward other powers, are in progress, and is used for the detection and prevention of acts which might lead to reclamations and possibly endanger the peace of the country, etc. I trust that the above statement will remove any doubt, and that your committee will agree with me in the opinion that no more indispensable appropriation can be asked, and that, without such a fund to be expended in the discretion of the President, the Government would be at the mercy of the filibusters and plotters against its peace, and of those who may seek to involve it in foreign complications and even in war. In regard to the inquiry as to the mixed courts, the Secretary states that a treaty was entered into with Great Britain, in pursuance of which the court at New York adjourned *sine die* October 31, 1870, and the courts at Sierra Leone and Cape Town have also been discontinued, although no official notice of the fact has been received by the State Department.

Personal.

Generals Sheridan and Duff are expected here this week to testify before the Select Committee on the Mexican border outrages.

WASHINGTON, D. C., February 7, 1876.

NOMINATIONS BY THE PRESIDENT.

The President sent the following nominations to the Senate to-day: John I. Rinaker, United States Attorney for the Southern district of Illinois; A. E. Adams, of Kentucky, Consul at Port Said, Egypt; H. S. Salter, of Iowa, Register of Land Office, Lewistown, Idaho.

PACIFIC RAILROAD SINKING FUNDS.

The sinking fund proposition of the Union Pacific and Central Pacific Railroad Companies, sent to Congress by the Secretary of the Treasury to-day, are those which were submitted in February, 1875, providing in each case for the creation of a sinking fund, by the payment of certain fixed amounts into the United States Treasury yearly, and also the retention by the Government of all amounts then or thereafter earned for Governmental transportation. Secretary Bristow expresses an opinion that some such arrangement should be made, but leaves it wholly to Congress to determine how and by what means, and in what sums and at what per cent. sinking funds should be obtained and applied. He intimates, however, that he considers the offers of the two companies inadequate. The Central Pacific proposed to pay $400,000 per annum, and the Union Pacific $500,000 per annum for the first ten years, $750,000 for the next ten years, and $1,000,000 yearly thereafter.

SOUTHERN PACIFIC RAILROAD.

In answer to the arguments recently used, that the Southern Pacific Railroad Company would not build its road, even if authorized so to do, the reply is made that Mr. Huntington has offered to have the road to the Rio Grande in three and a half years, and has assurances from strong companies to have the line from New Orleans there to meet it, and is willing to put up good and sufficient security in the Treasury.

CONFIRMATIONS BY THE SENATE.

The Senate to-day confirmed the following nominations: Charles E. Braun, Pension Agent at Cincinnati; Levi Dagon, Coiner of Mint, at Carson City, Nevada. There was a discussion, which lasted nearly an hour and a half, respecting the nomination of E. C. Billings to be United States District Judge for Louisiana, *vice* Durell, resigned. The report of the Judiciary Committee recommends his confirmation. This was opposed by several Democratic Senators, on the ground that Billings took part in the preparation and issuance of the so-called "midnight order" of Judge Durell, and that he was improperly connected with the transaction of Norton, the Register in Bankruptcy. These allegations were denied by Senator West and several members of the Judiciary Committee, who claimed to show that they were unfounded. The indications are that when the matter is decided Billings will be confirmed by nearly the solid Republican vote, and his friends assert that some of the Democratic Senators also will vote for his confirmation.

NEWS SUMMARY.

BY TELEGRAPH.

Probabilities for To-day.—Rising, followed by falling barometer, winds veering to northeast and southeast, colder and partly cloudy weather.

One million dollars in silver are *en route* from San Francisco to London.

The London market is bare of United States new five per cents (the funded loan).

The steamers Donan, from Bremen, and Celtic, from Liverpool, have arrived at New York.

The safe of J. E. Boyd, a pork packer of Omaha, was robbed of $200 Sunday night. The jaunt r has been arrested.

The bill to repeal the Potter law of Wisconsin has been made the special order for to-morrow, to remain the special order till disposed of.

The Euclid Avenue and the First Congregational churches, of Chicago, have accepted the invitations to the Plymouth Advisory Council.

The Second Congregational church of Norwich, Connecticut, has unanimously voted to decline participation in the Plymouth Advisory Council.

Over forty houses are now up in Custer City, in the Black Hills, and sixty more are building. Flour is twelve dollars a barrel and shoulder bacon thirty cents a pound.

The Common Council of Brussels has decided to invite Mr. Motley, the historian of the Dutch Republic, to a great historical fete in honor of the patriots of the sixteenth century.

The Sublime Porte's circular in regard to reforms promised in the Northern provinces, mentions the basis of the discussion, not only negotiations with Austria, Russia and Germany, but also the support of the scheme by the other guaranteeing powers.

Sixty thousand men and boys are out of employment by the suspension of mining in the anthracite coal fields of Pennsylvania. It is expected that the suspension will have the effect of clearing the overcrowded coal yards at tide water and making room for a good spring trade.

A long distance, free-for all skating match for the championship of America and a purse made up by the parties entering, will begin at the Chicago Exposition Skating Park on Monday, February 14th, and continue six days. The competitor who skates the greatest distance will be declared the winner of the race. Wm. B. Curtis, the South Park Skater, probably will act as referee, and all applications for entry may be addressed to him.

The amount of rain, or rain and melted snow for the past week averages about as follows in the various districts: St. Lawrence Valley, 1.00 inch; New England, 1.30; Middle Atlantic States, 1.18; South Atlantic States, 0.75; Eastern Gulf States, 1.10; Western Gulf States, 1.15; Lower Lake region, 0.50; Upper Lake region, 0.30; Ohio Valley and Tennessee, 0.85; Upper Mississippi Valley, 0.22; Missouri Valley, 0.05; Minnesota, 0.04.

POLITICAL.

State.

The Greenback party in Middlesex, Mercer county, contemplates putting a local ticket in the field.

It is said that the Republicans of Philadelphia have decided to retire Hon. Wm. D. Kelley from Congress at the end of his present term. This conclusion is natural and proper. Mr. Kelley has entirely destroyed his usefulness as a Republican Congressman. His blatant and communistic talk during the last fall put him almost in the ranks of the inflation Democracy, and he finds himself on the Republican side of the House as lonely and neglected as Robinson Crusoe. He talked everything on the success of inflation, and lost. Ring out the false, ring in the true!—*Cleveland Leader.*

General.

Now to the ordinary Democratic rabble is added the low tariff-raff.—*Graphic.*

The *World* wants a new war-cry. Let it be the Unratified Democracy.—*Graphic.*

The New York *World* is accused of designing to kill Sunset Cox politically. The impression is, however, that it is superfluous malice, Sam having already talked himself to death

Congressman Tufts, of Iowa, is evidently something of a wag. He writes to a friend that his seat is between Mr. Blaine and Mr. Wm. S. King, and adds that he "hopes to absorb a little statesmanship from one and a little subsidy from the other."

Republican State conventions have been called as follows: Illinois, at Chicago, on the 22d of February; Connecticut at Hartford, on the 29th of February; Michigan, at Grand Rapids, on the 10th of May; Pennsylvania, at Harrisburg, on the 29th of March.

The washing of the Congressional towels, which has heretofore been performed by a few poor and needy washerwomen, is to be awarded by a contract to the lowest bidder. Voting thousands of dollars to impudent cuious ex-rebels, and cutting down the wages of washerwomen, seems to be the Democratic idea of "retrenchment and reform."

An amusing incident occurred in

The Commercial.

TUESDAY, FEBRUARY 8, 1876.

THE English Parliament assembles today. The session promises to be of unusual importance.

WHERE the gong sounds loudest the supper is the smallest. Congress is still harping on "retrenchment."

MILTON made his devils true to each other, but the Democratic leaders are destitute even of the quality of diabolical fidelity.

THEY suppress papers in France for publishing false news. Should the precedent be followed in this country it will go mighty hard with the Democratic press.

YOU cannot cure a cancer with a bread and milk poultice. JEFF DAVIS' last letter shows him to be at heart as bitter and malignant a rebel as he ever was. It would degrade amnesty to waste it on such a wretch.

THE political homiletics of the New York *Tribune* are doubtless very powerful and affecting. As a teacher of political morals that paper holds about the same position among genuine instructors that a "Peter Funk" holds among merchants.

THE *Financial Chronicle* forcibly urges one uniform United States security, as in the French *rentes* and the English consols, since thus only can we avail ourselves of the full force of the present and prospective advantages which the foreign money markets seem to be offering to our Government securities.

JEFF. DAVIS says the rebel authorities had sixty thousand more Federal prisoners that we had of Confederates, during the war. This is not true. The Union armies captured 476,168 men, while the rebels took only 188,144. The nation has been a hundred years developing the perfect liar, and the State of Tennessee has at present got him.

THE *Bulletin of the Iron and Steel Association* considers it quite safe to predict that one good outcome of the present business depression will be to stay the prevailing centralizing rush into the cities and manufacturing towns, and the gradual reflux of aspiring and discontented youth who are in a hurry to be rich, into the good, old-fashioned, independent, slow but sure pursuit of agriculture.

IT APPEARS that the House Appropriation Committee at Washington, in preparing to reduce the clerical force in the Executive Departments twenty per cent., has been playing with atwo-edged sword. The correspondent of the Chicago *Times* says:

"The various State Associations have been making an exact computation of the number and politics of the entire clerical force here. The result is as amusing as it is astonishing. It is coming to light now that almost exactly that percentage of clerks are Democratic."

The department officers will of course remove the Democrats first, since it was that party which first began the war.

THE question of a protective tariff is receiving considerable attention in the Canadian provinces, and it is not improbable that the government may pass a protective tariff law at the coming session of Parliament. The Dominion Board of Trade recently closed a long session at Ottawa, at which the tariff question was very ably discussed, and the board passed resolutions by a large majority recommending the passage of a protective tariff, although many people, notably those of Novia Scotia, prefer a reciprocity trade with the United States, their imports being larger than their exports.

CANADA is getting thoroughly waked up on the question of Church and State. An immense public meeting was held at Quebec last Friday night, at which resolutions were unanimously passed requesting the Dominion government to repeal the act providing for a sectarian school system in the Northwest Territories, and also to take immedfate steps to report a constitutional amendment which will abolish the collection of tithes for the support of any church by legal process, and the appropriation of any taxes or money from the public treasury in any province or municipality to the purposes of sectarian institutions, educational or ecclesiastical.

SOME of the papers take a very lugubrious view of the future of the country. The Buffalo *Commercial Advertiser* says: "The times in fact are waxing evil, and the crisis seriously alarms all law-abiding, God-fearing people." The better elements of our civilization, however, are beginning to make themselves felt. DEAN SWIFT and theorist, misanthrope and philanthropist, he said that there was about the same amount of virtue at all times in the world, but that sometimes there might be a peck of it in Asia and only a thimble-full in Europe, while at other times the proportion would be reversed. America may have been chasing virtue, like gold, out of the country for some years past, but the balance of trade will one day turn in our favor again.

BUSINESS in the oil regions is assuming a more cheerful aspect than has been known for two or three years. From a year to eighteen months ago it was not uncommon for large sales of crude oil to be made there at forty cents a barrel, or about a cent a gallon. The same quality of oil is now selling at from $2 13 to $2 15 a barrel. There are some indications that this revival may become permanent, the spreading rebellion of the people against the outrageous impositions practiced in charges for gas being among the reasons. The beneficial effects of renewed activity in the oil-producing regions would be felt in a large part of the country. In 1873 our exports of refined oil reached 209,021,305 gallons, and were valued at $41,854,841. In 1874 the shipments aggregated 208,655,382 gallons, valued at $30,497,191.

The question of the improvement of the Ohio river, which possesses so much interest for the people of Pittsburgh, is beginning to occupy the attention of some of the most sagacious minds of the East as well as the West. The Jersey City *Journal* of Saturday contains a lengthy communication from an eminent business man of New York, in which, after urging the accomplishment of this long delayed and most important work, he says:

"It would be difficult to state its value to the trade of New York, and yet with sublime indifference our merchants look upon it as having little or no bearing upon the commercial prosperity of this city. Such indifference is as incompatible with the commerce interests of New York as were the ignorance and short-sighted policy of New York merchants in denouncing in terms of obloquy the construction of the Erie canal. But the national character of this great work imposes upon Congress also the obligation to give to it that consideration and aid which its importance demands no less than that to the improvement of the Mississippi river."

EMERSON'S latest work, "Letters and Social Aims," is treated with lofty superiority by the London *Athenæum*. The final sentences of the review are that the work is "that of a man who looks through colored spectacles, and sees nothing except in their light. He wants that last and most useful gift of genius, the power to keep young in soul, and to advance with advancing years. Modern work and modern speculation scarcely reach him. Science, with the dazzling visions it has of late suggested, has, of course, some attraction for him, and history illustrates his views on the future of man; but modern art finds him cold, distrustful and unsympathetic, and ready to apply old canons and shibboleths." This is wretchedly inadequate and shallow. EMERSON requires more meditation to the square inch of his pages than any writer of our time. The reviewer has not read him either carefully or correctly. Indeed, we doubt whether the critic at all comprehends what the author's qualities as a literary man really are.

THE St. Louis *Republican* has this to say of the Fifteenth Amendment to the Constitution:

"Physical opposition to it is, of course, out of the question, but moral opposition is increasing every day. It would be strange if it were otherwise. Because the people are fools once it does not necessarily follow that they should be fools forever; and when they look at Louisiana, Mississippi and South Carolina, and see the practical workings of negro suffrage, they may well sit down in sackcloth and ashes and curse the hour when they started a machine which has done such wretched work and gives small promise of ever doing any better. To assume that a majority of the American people to-day endorse the conferring of the ballot upon a million of emancipated slaves, is assuming a lie. They know their error and repent it bitterly."

The *Republican* simply condemns itself and its party. It was not the Republicans who kept the blacks ignorant. All the education they have got, has been given under Republican rule. Are we expected in ten years to undo the Democratic failures of two centuries?

THE impression that too many branches are taught in the public schools of most cities, and that it would be beneficial both to the taxpayers and the pupils to reduce their number, is steadily gaining ground. A leading religious journal of New York insists, indeed, that the entire curriculum of our public schools needs revision; holding that it is not the duty of the State to turn out incipient lawyers, engineers, mathematicians, linguists, or musicians; that, as a matter of self-protection, the State owes it to itself that all citizens possess a knowledge of the common English branches, such as are essential to the apprehension of the duties of citizenship, but that beyond this the State has no right to go. The *Commercial Advertiser* dwells on the fact that cramming children is nearly as deleterious, in the end, as giving them no learning at all. Another religious paper of extended influence also takes ground against teaching "algebra, music, and what is known as the higher branches," saying:

"There are a good many poor people that have to pay these taxes, widows, unmarried people and old people, who, it would seem, should not be called on to provide luxuries or means of support for others. There are many parents so poor that they cannot let their children go on to these heights of education. Ought they to pay for others' children who can go on? It is possible to nurse a spirit of communism under such a specious form as this. Yet the form it takes is at present so beautiful, and we have such a natural pride in providing the finest opportunities, that the wrong which may here entrench itself will be difficult to attack."

The *Herald* concurs in this view, setting forth that the object of the public schools is directly to fit our youth for their duties as American citizens and to take their places as intelligent members of society, to accomplish which only a plain but sound education is needed. The *Express* holds that it is no part of the duty of the State to educate its children beyond a substantial common school education, and the *Journal of Commerce*, whilst admitting that these schools are the bulwark of the State, insists that for all beyond what is properly taught there, parents should provide without taxing the people at large.

GENERAL AND PARTICULAR.

Congress resounds with noisy emptiness as of a thousand beaten drums.

Delaware proposes to establish sugar making as a regular home industry.

Wanted: The history of a recent murder trial that didn't involve an allegation of insanity.

The Democratic Supreme Court of Texas has just decided that contracts for Confederate money are not valid.

It will help business to revive if every one who has work to do will do it, and mind his own business.

Congressman Piper, of California, owns over 2,000 acres in the heart of San Francisco. It pays the piper.

Congressman Willis wants to have the army and navy supplied with dentists, but his reasons are toothin.

Think of it. One branch of the Manitoban Legislature has actually voted itself out of existence to save expense.

"Asses' Ears" is the name of a forthcoming book. It does not, however, relate to Eli Perkins' auricular appendages.

Philadelphia claims the palm "for the greatest religious meetings ever held on this Continent." Now for the fruits.

In New York and vicinity there are upwards of five hundred florists with an aggregate invested capital of $10,000,000.

Italy is so pleased with Great Britain's idea of heavy artillery that she has ordered a hundred ton gun to be cast for her naval service.

St. Joseph, Missouri, is all aglow with satisfaction over the discovery of extensive cannel coal beds within a few miles of that city.

Germany is going to send over here several officers of the mining department, with instructions to study up our mining industries.

A hint for our own cities. A company has been organized in London to manufacture gas from sewage by a wonderfully cheap process.

Lieutenant Cameron's recently completed African exploring tour was a great success, every member of his party but himself having died.

The New York *World* notes a marked revival in the demand for business property in that city. Notably this is true of store property for lease.

Miss Cozens, a "lady lawyer" of St. Louis, says the only lawyers who object to seeing her in the profession are the "tadpoles and minnows." Correct.

Bob Toombs couldn't vote in any country. He says that the suffrage should not be conferred on either knaves or fools, which would doubly exclude him.

A new theory has been started in England, that the foot-and-mouth disease, which is so prevalent among cattle there, is conveyed from one district to another by birds.

Last year the importations of raw silk into the United States, reached the large aggregate of 1,330,482 pounds, denoting a rapid growth of the silk manufacturing industries.

A memorial signed by citizens of every State and Territory is before Congress for the appointment of the twelfth day of February, the day Abraham Lincoln was born, as a legal holiday.

The scheme for deepening the river Irwell, and thereby making Manchester a shipping port, has been revived in England. Liverpool, however, thinks it wouldn't suit her well.

Samuel Cox says he don't hanker after the Presidency "My place is in Congress." True. He's safer, there. The Congressional buffoon is the illiberal inheriter of the immunities of the court fool.

In Boston the other day, a prisoner, in testifying in his own behalf, solemnly said: "Gentlemen of the jury, I never stole any junk in my life. That isn't my line. The dry goods business is my line."

Kansas has just passed a law allowing counties to give a premium of $5 per bushel for grasshopper eggs, and sixty cents per bushel for unfledged grasshoppers. The counties will jump at the chance.

Everything now-a-days, laments a writer in *Scribner*, is over-ornamented, furniture, rooms, houses, churches and even note paper. This is true; the beauty of simplicity in form and outline appears to be unknown.

A former attache of the Chicago *Tribune* claims that in 1865 that paper received through the Cobden Club, of London, $10,000 in gold as compensation for its advocacy of free trade. It certainly earned the money.

PERSONAL.

Senator English has turned over all his back pay to Senator Ferry's widow.

The Emperor of Brazil is to arrive in Washington in April, and, after visiting the centennial, will travel through the country for about three months.

Our consul at Calcutta is named Litchfield. During the Prince of Wales' late visit to that city he figured amid the rajahs and maharajahs as a splendid creature in a "dark helmet and modelling yellow plumes." He should be invited to return home.

A little Connecticut girl whose father recently died, being displeased that her mother has fallen in love with another man, applied to the mayor, the other day, to have the affair stopped by the police, and when informed that they couldn't do anything about it left his office, crying.

Another Democratic ex-Congressman has been provided with a subordinate position by the Clerk of the House of Representatives. Morgan Rawls, late a Representative from Georgia, has been made Superintendent of boxes in the folding room. Poverty compelled him to accept the place, which is that of a common laborer.

People had expected that McKee's chief partner, Houser, would be more or less reached during the trial against McKee, but from the very beginning of the whisky troubles to the present time that gentleman has passed through the fire of investigation unscathed, his good name never befouled nor stained, and the records showing him to have been amidst this reign of corruption a man *sans peur et sans reproche*.

Father Pelamorgues, who was the first Catholic priest sent to Iowa, going there in 1839 as a missionary priest from France, died in Paris the other day. He officiated until 1861, when he returned to France to end his days. When he went to Iowa there were 400 Catholics in the State; now there are 125,000. He established the first church in Davenport. He was a man of great piety, charity, ability and liberality, and was beloved by all sects. He had been quite well off, but gave his property away in charity and died in poverty at the age of seventy years.

NEW METHODS IN IRON WORKING.

The Etna Iron Works at Ironton, Ohio—New Principles and Combinations—The Ferrie Self-Coking Furnace—The Whitwell Hot Blast Stove—Description of the New Works—Practical Results.

To the Editor of the Pittsburgh Commercial:

During the last twelve months I have been solicited, on several occasions, by some of the leading journals and manufacturing papers of this country, to furnish a description of the Etna Iron Works at Ironton, Ohio, but have hitherto declined giving it, solely from the pardonable reason that it would be much more interesting and satisfactory, at the same time to be enabled to make some observations as to the practical working of the new principles and combinations which have been there adopted, viz: Ferrie's self-coking furnace, combined with the Whitwell hot blast stove.

Previously to 1868 and 1869, very little was known as to the working properties for metallurgical purposes of the vast coal beds of the West or the basin of the Mississippi; that is to say, their non-coking, soft, tender coals, of a splint, or block character, whose different varieties underlie nearly all the Western formations, unless, perhaps, are excepted the districts of the Mahoning and Shenango Valleys, converging at New Castle, Pa. Nevertheless, in my opinion, had the iron masters of these valleys been compelled to smelt their abundant supplies of the rich iron ores from Lake Superior, their success in developing and utilizing their great iron and mineral interests would have been measurably less, as would likewise have been their success in working in a raw state their famous block coal. Mr. Isaac Lowthian Bell on his visit to these works in the spring of 1874, believed the opinion of his opinion as to the working properties of our coal, declined giving it, stating that under such experiments on this subject with his furnace at the Clarence Iron Works, Cleveland district, England, he found a positive loss arising from using as low as 12 per cent. of raw coal as a mixture with his coke, and that the analysis of the coal used differed little from that of Scotland. Mr. Bell may be recognized, perhaps, as the most eminent metallurgist in the world, and his opinions carry weight whenever expressed.

For the past six years the result of my experience and observation in the West has been that the working of Indiana, Illinois, Kentucky and Missouri coals, in furnaces over fifty feet high, is attended with much trouble, and non-economical, unless mixed with a large percentage of Connellsville coke, from above Pittsburgh, to guarantee satisfactory results. The shipment of this coke to points like St. Louis, Cincinnati and Chicago, as well as to the Upper Mississippi and Lake Superior, must be expensive, no matter how cheaply it may be purchased. It was coating at St. Louis, in 1871, twenty cents per bushel or ten dollars per ton. During 1870 and 1871 the conclusion was irresistibly forced upon me by experience that St. Louis could not become an Iron center, and that the vast mineral resources of Missouri would remain undeveloped until she could fully utilize and master her own coals. This conviction determined my future actions, and has been their animating incentive ever since; hence my visit to Great Britain in 1871, and hence those works have been constructed.

During 1872 the results of my investigations were submitted to leading iron masters, and metallurgical engineers in nearly all the Iron districts, both East and West; yet none, excepting Mr. B. Crowther, of Pittsburgh, Messrs. Philip Kingsland and R. W. Lovell, of St. Louis, would recognize any merit in the theories and principles which Scotland, or in the Whitwell fire brick hot blast stoves of the Cleveland district, England.

During the spring of 1873 I was invited by Mr. George Willard, of this city, to visit him, and found that he was built with the Etna Iron Works Company, which had been organized with a capital of $1,000,000; $350,000 of said capital consisted of two charcoal furnaces, and some 22,000 acres of ore and coal lands well developed.

It was in this enterprising little city, alone, that I found iron men disposed to discuss the question of a new departure from established customs in the production of pig metal; and within a week fifteen gentlemen connected with Etna Iron Works unanimously voted to adopt the Ferrie system, and the Whitwell stoves, besides determining upon constructing a plant of two large modern furnaces instead of one small one which had been previously contemplated. A commission was then appointed to visit Great Britain, which only returned a few weeks before the great panic of 1873. It has therefore required both nerve and great financial ability to keep such an undertaking afloat, especially such a succession and reaction.

The plant of two furnaces are within one casting house, 107 feet long and 120 feet wide, six columns formed of wrought iron I beams supporting the double pitched iron roof at its center.

The wrought iron furnace casings are each 27 feet 6 inches in diameter and almost 71 feet 6 inches high, parallel the entire height. These castings upon massive cut stone piers, the whole superstructure of each furnace resting upon ten cast iron columns about 18 feet long each.

The boiler and engine houses are parallel to the cast house and have a dividing wall common to both, with communications at each end. The boiler house, which is arranged for three batteries of boilers, each four feet wide, and each battery, is 91 feet 6 inches wide and 36 feet 2 inches long. The engine house is 88 feet 3 inches long and 44 feet wide, and arranged for five vertical blowing engines; the two now working were built by Messrs. Mackintosh, Hemphill & Co., of Pittsburgh, who are also observedly known in that class of machinery.

The engine house is partly roofed by two water tanks, one at either end, each one twenty-six feet 6 inches wide and 44 feet long. The two ponds are on the side hill and are retained by the brick walls, the other side, forming a strong girder, is supported by two columns which serve as the end and overflow pipes. These tanks are curved on the bottom, being 6 feet deep at the center, and are consequently self-supporting.

The smoke stack or chimney is situated at the rear or center of the boiler house, and is brick base 22 feet square and 25 feet high. At the top of this base is the cast iron plate for the first wrought iron shell is riveted. The total height of this chimney, from the bottom of its foundation to the top, is 150 feet above the floor line, is about 194 feet, and is 9 feet diameter in the clear.

The stock house is in the form of an L, and is 75 feet wide, with a total length of 350 feet. The clear or main portion, with the usual slope in incline, which is worked by a pair of horizontal hoisting engines. The wagons, when raised, are run on a platform 12 feet above and 25 feet high and 36 feet wide. These bunkers are capable of holding a large stock of materials, which is run out from each side the bottom of them into the charging barrows, by means of sliding doors worked by levers, so that a great deal of unnecessary shoveling is thus obviated. It is intended to erect, in connection with the stock house, calcining kilns 20 feet in diameter and 40 feet high. The furnace shed is composed of ten cast iron columns, and when both furnaces are running will have a traveling crane, each part being worked by an upright automatic hoisting engine, built by Crane Bros., of Chicago. The total length of this structure is 350 feet.

The water supply is from the Ohio, a waterlight iron curtain being sunk in the river bed some distance from the bank. This curtain or dry well is twelve feet in diameter at the bottom and twenty-four feet at the top, and is fifty feet high. Two large vertical Cameron pumps of 36 inch stroke and 24 inch gridiron are connected as he was then doing, and carrying it in large cast iron pipes external to the furnace casing. This idea was in part tried out, as in the end as it has been previously stated, that we did away with the external pipes, and made the air or chamber within the brick lining of the furnace. There are four platforms encircling the furnace, so that the combustion of the gases, and the temperature of the brickwork, can be easily seen and ascertained at any part of the retorts.

This furnace is filled as simply as any ordinary one, the hopper, fourteen feet in diameter, being partitioned so as to divide it into four equal parts, each part corresponding with a retort below; a distinct charge is placed in each compartment, and as the bell is lowered each retort receives its distinct charge; thus each section of the furnace receives an equal quantity of stock, and from top to bottom, should any part not be doing its duty, it can be at once detected. This alone is a great advantage over other closed-top furnaces. When combustion of the gases is well established in the flues encircling the compartments, the temperature within ranges from 1,400 to 1,600 degrees. This, combined with the ascending heat from the lower parts of the furnace, completely coakes the coal in its passage down the four retorts, at the same time bringing the ores and fluxes to a high temperature; thus we have at once four distinct advantages:

First, The expulsion of hydro-carbons from the coal which is at least forty per cent. of its weight; second, the driving off from the limestone its carbonic acid which, according to Mr. Bell, is forty-four per cent. of its weight, third, a partial deoxidation of the ore; fourth, the friction of the descending materials in a highly heated state relieves the stock in the lower part of the furnace of at least twenty per cent. of its superimposed weight, which, without this combination, would have to be carried by it.

Now to test the condition of the stock after it had passed through these retorts. At Mr. Ferrie's furnace at the Monkland Iron Works, Scotland, by the request of Mr. Lowthian Bell, a hole was drilled through the in-wall, at a point about on a level with the spring of the arches; the burden, as seen through this opening, was at a bright red heat, and the temperature taken by means of the Siemen's pyrometer six inches from inside of lining was at one reading 1,450 degrees and at another 1,554 degrees. The gases passing out of this opening were of a pale blue color, indicating that the first at that zone had parted with its principal gaseous components, and was in a state of coke. It was thus, therefore, demonstrated by incontrovertible authority, that the coal in its descent through the retorts had been coked with but very little loss of carbon; that the ores and limestone had undergone a beneficial change, and that these materials in this condition, combined with the friction of the stock against the walls of the retorts, and thus transmitted through the arches to the in-walls, will reduce the vertical pressure which comes from the weight of the retorts sank irregularly and would occasionally hang, they (their actions and interactions being the same as taking down pillars) must be the cause of the temporary trouble; therefore, apart from my own chief assistant, Mr. Almond, the whole concentrated opinion of our community, stockholders and others, including those who had no faith in the result in other iron districts, were decided in condemning the retorts, and the system generally. In vain we asserted and undertook to demonstrate that the raw materials, in their descent down the retorts, and in contact with their walls at an incandescent heat, cannot possibly stick fast, besides their motion was increased inversely to the space occupied by the intermediate walls; and again, the greater the heat of these walls, the more they forbid and repel any adhesion; nevertheless, in support of these views, we tapped the retorts at the base of the first row of the arches, and found neither evidence of clinkers nor cohesion; on the contrary, all the materials were in a bright, free condition, to sink, as soon as the trunk of the furnace would make room to receive them. This fully sustained my previous impressions, viz.: that the furnace was lodged, and formed in the upper portion of the furnace, thus supporting the stock in the truncated coal above, and preventing the retorts, or compartments, from delivering the same properly. By the same process of reasoning, we found that the furnace had caught on one section of the lining, and that the gases were escaping through the ore and limestone, and where they reached the tuyeres; besides, these chemical and metallurgical changes become subject to the will of the manager, because he can regulate the temperature in the upper zones as his judgment may dictate. Another important advantage that I would here call attention to, is that each one of the four retorts receives the same charges, which must succeed regularly, or else they give very sure indication by trouble, in the vicinity of the boshes, or below the arches, and since the secret of the good working of all fascending materials in the retorts and upper zones; third, that with the same material and support, she can make iron cheaper, more of it, and of a better quality than any other furnace in America; fourth, that the combination of the Ferrie self-coking system and the Whitwell hot blast, have surpassed the most sanguine wishes and expectations of the projectors of the Etna plant, and that they are capable at no distant time, if well handled and supported, of creating a new future for our Western iron industries, nay, of the whole Union, by placing us on the same level as Great Britain now is, in her most favored districts. But I am in no ways insensible to the fact that much, very much, has to be accomplished before that end can be attained; neither can I insensible to the fact that lack of organization and system with which nepotism and favoritism, without regard to merit, experience or capacity, endeavors to control many of our large Western stock companies, and it is precisely in our furnace, financial difficulties that occupied by this surplus of coal would in a great measure be taken by the minerals to be reduced.

I now come to another very important combination at the Etna Iron Works, viz: Whitwell's fire brick hot blast stoves. During my visit to England and Scotland in 1871 and 1873, I had the pleasure of meeting Mr. Edward Whitwell, who last year visited us, and who, it is needless to say, is recognized as one of the leading metallurgical engineers of Europe. And I am indeed mistaken if his invention, at no distant time, is not destined to become as universal in this country as it is fast doing in Europe. There are four of these stoves here in full operation, and I make bold to say, as to first ones of this description that have ever been worked by the aid of a furnace using raw coal. A comparison between these stoves and the ordinary ones with cast iron pipes is no longer a discussible question. First, because they cost but little more than the cast iron ones, thus avoiding the inefficient of the latter built for the absolute requirements of a large furnace; second, because they are almost indestructible, as although they have been at a red burning gases are of the most refractory fire brick; third, from the nature of their construction there is no friction, besides acting as receivers for the blast, which they equally accumulate and steady to the tuyeres; fourth, the temperature obtained is nearly double that from other stoves, consequently we recovery the heat, hence nearly every unit of calorie the gas is capable of imparting. In fact, I have repeatedly seen zinc cut at the twenty in from one to two seconds, and any exposed part of the belly-pipe show a bright red from the gas in flame. If in the hands of an intelligent manager and engineer, the working of the furnace can in a great measure be regulated, and the whole governed and corrected without change of burden, as they contain a heat of 1,000 degrees of calorie subject to his will; sixth, if from any cause it should become expedient to stop the furnace for a few days, it can start up again with but a nominal reduction of the heat of its blast, from the simple reason that the nature of fire brick is to retain the heat long imparted to it, for a long period, more particularly when enclosed, as about the stoves, exposed to, loss by radiation. This fact becomes evident on observing the stoves when working for, although cold, they appear dark.

Now, with very little evidence of heat, on the blast to the furnace, the dome appears at a glowing red heat and this is not to be wondered at when we take into consideration that each stove contains 1,200 fire brick, or nearly 6,000 cubic feet of material which it parts but slowly; seventh, they are peculiarly adapted to our soft Western fuels, and as a result we have obtained from some of the retorts sank irregularly and would occasionally hang, they (their actions and interactions being the same as taking down pillars) must be the cause of the temporary trouble; therefore, apart from my own chief assistant, Mr. Almond, the whole concentrated opinion of our community, stockholders and others, including those who had no faith in the result in other iron districts, were decided in condemning the retorts, and the system generally. In vain we asserted and undertook to demonstrate that the raw materials, in their descent down the retorts, and in contact with their walls at an incandescent heat, cannot possibly stick fast, besides their motion was increased inversely to the space occupied by the intermediate walls; and again, the greater the heat of these walls, the more they forbid and repel any adhesion; nevertheless, in support of these views, we tapped the retorts at the base of the first row of the arches, and found neither evidence of clinkers nor cohesion; on the contrary, all the materials were in a bright, free condition, to sink, as soon as the trunk of the furnace would make room to receive them. This fully sustained my previous impressions, viz.: that the furnace was lodged, and formed in the upper portion of the furnace, thus supporting the stock in the truncated coal above, and preventing the retorts, or compartments, from delivering the same properly. By the same process of reasoning, we found that the furnace had caught on one section of the lining, and that the gases were escaping through the ore and limestone, and where they reached the tuyeres; besides, these chemical and metallurgical changes become subject to the will of the manager, because he can regulate the temperature in the upper zones as his judgment may dictate. Another important advantage that I would here call attention to, is that each one of the four retorts receives the same charges, which must succeed regularly, or else they give very sure indication by trouble, in the vicinity of the boshes, or below the arches, and since the secret of the good working of all fascending materials in the retorts and upper zones chiefly depends upon having every square foot of area doing its duty, it is reasonable to suppose, if this system be properly understood and handled, that it will conduce more to that result than any other; and from my own observations and experience, deduced from actual practice which have been at first met with no small amount of anxiety on my part, I feel perfectly safe in asserting this to be a *sine qua non*.

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FINANCE AND TRADE.

MONDAY EVENING, February 7, 1876.

The week opens quietly in monetary affairs and loanable capital continues abundant. Paper with undoubted names can be placed at 6 or 7 per cent. per annum in large amounts, but parties of this character are not borrowers, and as a result transactions at these figures are very limited. As the security offered scales down in quality the interest scales up in quantity —as is the inexorable rule—the usury law to the contrary notwithstanding.

Recent events have attracted more than usual attention to the question of the usury law. An intelligent writer in the Allentown *News* discusses the question ably, and as his remarks are worthy of attention we reproduce a portion of them:

In seven-eighths of the United States and Territories the interest laws are free, the rate being regulated by contract. They are as follows: Maine, Massachusetts, Connecticut, Rhode Island, California, Arkansas, Florida, Mississippi, South Carolina, Georgia, Texas, Nevada, Arizona, Colorado, Utah, Wyoming and Washington Territory. In the following seventeen States and Territories the rate is free to be fixed between the lender and borrower up to ten per cent., and in a few of them twelve per cent., or more, may be contracted for, viz: District of Columbia (by Congressional action), Virginia, Illinois, Indiana, Michigan, Minnesota, Missouri, Tennessee, Iowa, Wisconsin, Kentucky, Kansas, Nebraska, Oregon, Dakotah, New Mexico and Idaho. Since 1873, the maximum rate is eight per cent., as follows: Ohio, Louisiana and North Carolina. In three States, New York, New Jersey and Vermont, the maximum limit is seven per cent., while only five States, Pennsylvania, New Hampshire, Delaware, Maryland and West Virginia, have the one fixed rate of six per cent.

The fixing of the rate of interest at an arbitrary, immoveable figure at which all money must be loaned, or not at all, is one of credit is counted, is only a little less inconsistent than a law requiring insurance companies to insure all classes and species of property against loss by fire at the same rate per each risks are classified and for each class a rate is elected which experience has shown is necessary to compensate for and is consistent with the hazard, and a proposition to compel insurance companies a proposition to compel insurance companies to insure a planing mill, oil refinery or other like hazardous risks at the same rate charged for first class dwelling houses, would at once be recognized as preposterous. How it will be recognized as preposterous. How it with notes and bills of credit? They embrace as many classes of grades of business risks as are to be found in insurance risks, and the difference is known and acknowledged by all men, and is consistent with the hazard, and

It is recognized, accepted and acted on by every branch of business and trade, and yet we have laws on the statute books of Penns, Ivania which command all business men, under penalty to ignore this difference and say by their acts that no difference exists. So of real rate of interest for money loaned on mortgage is not apparently so inconsistent with the dictates of common sense as is applied to bills of credit, but even in this class of securities there is a marked difference in the rel

CITY MATTERS.

For eighty-five cents per month the DAILY COMMERCIAL will be mailed to travelers or to subscribers who are temporarily absent from Pittsburgh. The address of the paper will be changed as often as is desired.

Local Observations.

OFFICE OF THE OBSERVER, U. S. SIG. SERV., Room 23, First National Bank, PITTSBURGH, PA., February 7, 1876.

Time.	Bar.	Th'r.	Hum	WIND. Dir.	Force.	Weath.
7 A. M.	30.384	40	80	W.	Fresh	Cloudy
2 P. M.	29.870	45	73	W.	Fresh.	Fair.
9 P. M.	30.406	38	81	N.W.	Light.	Smoky

Mean barometer.. 30.391 Highest thermon.... 46
Mean thermon.... 40.2 Lowest thermon.... 38

The Western University.

The next term opens February 7. Every opportunity afforded for obtaining a classical, scientific or business education.

Pittsburgh Female College.

Next term commences February 4th. Send for catalogue to Rev. I. C. Pershing, D. D., Pittsburgh, Pa.

Killed on the West Penn.

About five o'clock last evening a German woman, named Hahn, aged about sixty years, was run over near Bennett Station, on the West Penn Railroad, by the mail train, and instantly killed. The Coroner held an inquest last evening, and the jury returned a verdict of accidental death.

A Card.

The Managers of the Pittsburgh Association for the Improvement of the Poor return grateful thanks to Mrs. Dr. Cote, Mrs. Morrison Foster and their gentlemen assistants for the handsome sum of six hundred and fifty-four dollars and fifty-five cents, the net proceeds of the Grand Charity Concert given in Library Hall, January 20, 1876. And the Managers of the Association feel sure that if all who so generously aided the good work could witness the fruits of their labor of love they would indeed realize that it is more blessed to give than to receive.

MRS. C. F. MANN, Secretary.

PITTSBURGH, February 5, 1876.

The Masonic Loan.

The Secretary of the Grand Lodge of Masons of Pennsylvania gives notice to holders of the certificates of the 5th, 6th, 7th and 8th series of 7-30 loan that the same will be paid on the 14th inst., on which day interest thereon will cease. Holders of certificates of the 1st, 2d, 3d and 4th series will present the same for payment with out delay, as the interest thereon has ceased. Originally the 7-30 bonds were issued exclusively to lodges and Sixty subsequently 6 per cent. bonds were issued, open to all who subscribed for them or to all who alloted to exchange for the new 6s. The present 7-30 per cent all of the four last series contemplates an exchange of bonds, so far as the new bonds will go, and the payment of money for any excess.

The Temperance Alliance.

At the regular meeting of the Temperance Alliance yesterday, Messrs. George F. Turner, N. T. Powell, A Bryce and Mr. G. A. Relch were appointed a committee to report on the best mode of establishing lunch houses on the temperance plan.

Mr. Rabe, from the Committee on Anniversary, which is to be held in the Third Presbyterian church, reported that the meeting be held in the afternoon at 2:30 o'clock and in the evening at 7:30 o'clock and in the afternoon at 2:30 o'clock a children's jubilee will be held, to which all children are invited. It is given that the anniversary of the Alliance will be continued. On motion the following persons were appointed a committee on children's jubilee meeting: D. H. Martain: A. D. Fulton, J. H. Turner, Mrs. Norris Dixon, Mrs. Martin, Mrs. Sheets, Mrs. Torrence.

New Music

W. L. Thompson & Co., East Liverpool, Ohio, have sent to this office a bundle of new music including "Gathering Shells from the Seashore," song and chorus, words and music by Will L. Thompson, said to be one of the most popular of the day, a Chicago firm having ordered five thousand copies at one order. "The Harvest Time is Passing By," song and chorus by the same author; "Templars' Parade Grand March," by Will L. Thompson; and "Lamartine Waltzes" for the piano, from the same pen. The music is all pleasing, and published in handsome style.

Very opportunely comes from H. T. Martin, Parkersburg, W. Va., a song and chorus entitled "I Still Cherish the Shells that we gathered," being an answer from "Gathering Shells from the Seashore," words and music by Mr. H. T. Martin.

Personal.

Joseph D. Weeks, Esq., who has retired from the editorial management of the *American Manufacturer*, has accepted the position of associate editor and manager of the Pittsburgh office of *The Iron Age*, and will hereafter be found at the corner of Fifth avenue and Market street. *The Iron Age*, in making the announcement, says:

"Mr. Weeks is well and favorably known to the Western iron trade as an enterprising and experienced journalist. During his long and creditable connection with the Pittsburgh press he has made many friends, who will be glad to know that he has entered upon a larger field of usefulness than his former position afforded. As manager of our Western office, Mr. Weeks will have charge of our business interests there, and as associate editor he will be afforded every facility for representing the interests of the Western iron trade in our columns."

We cordially indorse the kindly words thus spoken of Mr. Weeks, and are pleased to learn that he is to remain a member of the editorial fraternity of Pittsburgh, by whom he is held in the highest regard.

Republican Suggestions.

Further suggestions of ward Republican candidates have been made as follows:

THIRD WARD, PITTSBURGH.

Select Council—Full term—John Shinton; unexpired term—Eugene O'Neill, Henry Schafer, Dr. F. Fundenburg.

Common Council—John N. Neeb.

School Directors—Peter Dressler and Dr. Wishart.

Assistant Assessors—A. Steinmeyer, H. Ehrman.

Constable—Clem. Kreuter.

First District—Judge, Louis Kettleberg; Inspector, Peter Gallbath.

Second District—Judge, Joseph Shafer; Inspector, David Steen.

FOURTEENTH WARD, PITTSBURGH.

Select Council—A. S. Bright, Colonel D. B. Morris.

Common Council—W. S. Pier, John Powell.

School Directors—Nelson Davis, William Holmes and James A. Bowen.

Assessor—Edward Dugan.

Constables—J. D. McDonough, Gottleib Steiner.

The primary election will take place on Saturday next, between four and seven o'clock P. M., at the Soho school house.

A Book for Pittsburghers.

THE WILDERNESS; OR, BRADDOCK'S TIMES. By Dr. James McIlvaine, author of "The Spectre of the Forest," "The Immigrant Cadet," etc. For sale by J. R. Weldin & Co.

This historical story of early times in Western Pennsylvania, first published in 1847, and in 1853, was reprinted in Pittsburgh in 1868, and is now reproduced by a home house in style similar to its second edition in 1868, when printed here by John B. Kennedy, now editor of the Allegheny *Mail*. Many of our older citizens read the book with much interest, but to the later generations it is unknown. It is a very appropriate work to revive in this Centennial year, and should find a place in every household in Western Pennsylvania. Eastern Ohio and West Virginia. Although a work of fiction, it treats of historical personages, and many of the scenes were laid in our immediate vicinity. A full account is given of Braddock's expedition and defeat, as well as much other matter of local historical interest.

But a limited number of copies have been issued, and those desiring to possess the book should go or send at once to Weldin & Co. It is handsomely bound in muslin, and sells for $1 50 per copy.

CITY MATTERS IN BRIEF.

COL. J. H. COGSWELL, editor of the Titusville *Herald*, is in the city.

The investigation at the Reform School has along quite smoothly yesterday.

The watch stolen from Thomas McStein at the Hibernian ball, last week, was recovered at a pawn shop.

The paper of John F. Bennett, printed elsewhere, on a plan to improve the Ohio river without obstructing the same is worthy of perusal.

SALT, with just about enough grease added to make it stick together, is sold in market under the name of butter. It brings a good price, too.

The Allegheny Poor Board met last evening and organized by the election of Mr. Neeley as President. The election of officers will take place next Monday.

A SLIGHT fire occurred about eleven o'clock yesterday in the large paper warehouse of the Allegheny Gas Works, causing a loss of about $200. The fire caught from the furnace.

Miss ——, residing at 218 Chestnut street, South Side, took two ounces of laudanum yesterday, on account of a young man. A doctor brought her around by means of a stomach pump.

FROM one hundred and fifty to two hundred persons attended the meeting held last night in the interest of the Ohio river improvement" yesterday, but the majority of them were opposed to improvements.

The Duquesne Incline Plane Company have received a charter of incorporation, under the broad seal of the Commonwealth, and the very first important step has been taken in this very important enterprise.

A VOCAL and instrumental concert for the benefit of the Lawrenceville public library will be given on Thursday evening next, the 10th inst., in the Seventeenth ward school hall. The programme is an excellent one.

The house of Joseph Miller, corner of Carson and Eleventh streets, was entered by burglars yesterday afternoon, while the family were absent, and robbed of a gold watch, some articles of jewelry and several dollars in silver.

W. HEMLICK, of Cincinnati, has issued a pamphlet containing a list of the counterfeit notes now in circulation in the United States; it also contains a description of genuine bank notes. It is a valuable work and sells for 25 cents.

THE Pittsburgh Book and News Company have received last second of "The Chevalier Casse Cou," by Fortune Du Boisgobey, entitled "The Search for Ancestors." The story is a thrilling one, equal in many respects to Sue's and Dumas' best efforts.

THE Pittsburgh Conference of the Methodist Episcopal Church will hold its annual session in the First church, Canton, Ohio, commencing March 15th and continuing one week. Upwards of six hundred ministers and laymen are expected to be in attendance.

DANIEL DOWNER, proprietor, and Joseph Hope, bar-keeper, of the Little Central saloon, on Market alley, were yesterday fined $100 for keeping and maintaining a disorderly house. Five other persons found in the place when "pulled" on Sunday night were fined $10 and costs.

PROF. DELANO JEFFRIES, the eminent elocutionist, will give an entertainment in behalf of the Young Ladies' Foreign Missionary Society, in the Lecture Room of the North Presbyterian Church, corner of Lincoln and Grant avenues, Allegheny City, at half-past seven o'clock, Tuesday evening, February 8th.

Notice.

Why endure the tortures of Coughs, Colds, Croup, Hoarseness, Whooping Cough, Consumption, Influenza, Asthma and Diphtheria when a quick and sure cure can be effected by the timely use of Alpine Throat and Lung Balsam. Try it. Try it. Ask your druggist for it. Take no other.

THE REFORM SCHOOL

Continuation of the Investigation.

Additional Testimony for the Defense.

Statements of Miss Johnston, Miss Kelly and Mrs. Miller.

The investigation into the management of the Reform School, by the Committee of the House of Representatives, was resumed yesterday forenoon, in the chapel of the institution. Half an hour was spent in consultation, previous to resuming business.

A rumor was circulated that Mr. Swartzwelder was going to withdraw from the case, but it proved to have been unfounded, as he was promptly on hand when the committee took their seats.

At half-past eleven, Messrs. Plummer, Findley, Thornton and Kenley took their seats. Mr. Billingsley had gone to Harrisburg, on business, and had not returned.

THE NURSE'S STATEMENT.

Miss Johnson sworn—Have been a nurse in the infirmary; was there last November; the infirmary, on the female side, was one large room, about 20x30, the boys infirmary consists of three rooms. Had charge of, to assist me—part of the time one, and part of the time two; one week I had three girls assisting; the patients, if bad, were visited every day by the physician; the nurses remained with the sick all night; the contagious diseases were locked in; the food was provided in the infirmary kitchen; the doctor left strict orders as to the food; never knew of a patient being neglected by the nurses; knew Rachel McKain; she was sick some time in November, 1874; she had typhoid pneumonia; she was not so very sick when first brought in she had. I think, taken part in a tableaux the night before she went to the infirmary; she died after the middle of December; was in daily and nightly attendance upon her during the whole of her sickness; when I was not there, there was some one else present; Rachel's mother was sent to come and see her, and she asked the privilege of nursing her; she stand over Sabbath, and went away on a Monday morning; Rachel was very low when her mother left; the mother said she would be back next day but did not come; that night Rachel died; word was sent to her mother, and she upbraided us for not sending for her and I told her she promised to come back herself; she said she had to attend to her washing that day; she lived on East Liberty. Remember Tillie Merriman, she took sick on the 14th of last October; her pulse was over 130 when she came in; she had typhoid fever; she died November 5th; there was always some person in the room with her; there were other patients, and they required day and night attendance. There were four or five others. The doctor, Dr. Childs, was there every day. Tillie Merriman received proper food and attention, as did also Rachel McKain; never knew of any neglect. Miss Pence reported Tillie to me as sick; the rule was that all sick should report to Miss McCoy, but Miss Pence had been carried out so strict lately; they sometimes report to me now; read Miss Pence's statement, about Tillie saying she was afraid to report to Miss McCoy; she could have reported to me.

To Mr. Plummer—That would not have been according to rule.

Mr. Swartzwelder—She did report to you finally.

To Mr. Plummer—There might have been cases of neglect without my knowing it, but not very serious ones.

To Mr. Swartzwelder—Was present when an interview took place, at which Mr. Avery is alleged to have used language; it was a question of any one who would prove disloyal to the institution. I do not remember hearing Mr. Avery use such language; it was not a very good humor myself.

Cross-examined by Mr. Gill—There were twenty-five boys, and five or six girls sick at that time; I had two assistants on the boys' side part of the time; they were there regularly an hour in the night I did not be present; it lasted five or six months; it told on my health, and is telling on it, yet; the under nurses were pretty well watched; it was possible for Mary Kennedy to go to the door and call "Rachel," "Rachel," but she could be heard in, as the infirmary was locked.

Mr. Gill—From your judgment as a nurse was the food such as you would supply to patients such as those were?

Witness—I acted upon the doctor's judgment; the doctor's orders were not always carried out. So far as I was concerned, no patient was neglected.

Mr. Thornton—Did you think you had assistance enough for the time?

Witness—So far as giving food and medicine was concerned, we had enough of assistance; I thought I was hard worked.

Mr. Gill—How was it possible for four nurses, physically, to entend to the toil, day and night, of attending so many?

Witness—I did not say they endured it day and night. There were not these assistants every day after day. They were changed off at intervals.

Mr. Gill—Do you know, of your own knowledge, that Mrs. McKain was sent for?

Witness—Mrs. Avery had been applied to, to give word to Mrs. McKain and an aunt, and they came down soon after; the inference was that they had been sent for.

Mr. Gill pressed his question, and wanted a "yes" or "no" answer—but the witness said she had stated all she knew about the matter.

To Mr. Gill—I always found some one present in the infirmary. Do not know what reasons the girls had for not reporting to the matron. Do not know that they had any particular reason.

To Mr. Thornton—Heard girls had complained that no attention was paid to them.

To Mr. Gill—Never heard Mrs. Avery speak against the institution outside of the walls.

Mr. Gill—Did you not hear Mr. Avery say anything about blasting reputation, etc?

Witness—Heard something said about not giving them recommendations, and about getting police to manage the institution if the officers could not.

Mr. Gill—Recommendations for what?

Witness—That he would not recommend them if they did not deserve it.

Mr. Thornton—What was said at that interview?

Witness—There had been a complaint made by the matron about "religulting"; she had threatened to resign, and she were called to have it talked over; could not remember half that was said; part of it was in the hall, and on the other side about this interview, was correct.

Mr. Plummer—The words might have been used by Mr. Avery, and you not have heard or recollected them.

Witness made no answer to this.

At this point the committee took the usual recess for dinner.

MISS KELLY'S STATEMENT.

Miss Mary E. Kelly sworn—Came here on 18th of last November; am teacher in girls' department; succeeded Miss Dickey; found the school badly demoralized—one of the worst I ever saw as a teacher; could not get order by any kind of order, so much so that I would have been glad to have left in a week after; the girls would talk and study out loud, would not be particular to ask permission to leave their seats; the disorder was so general that I could only calm the girls down gradually, and keep calm myself; teachers do not help cases of extreme bad conduct are reported to Miss McCoy—sometimes to Mr. Avery; know of one case of severe punishment; a little girl who had written obscene language on a slate; she was punished by Miss McCoy, after I had reported the matter to her; I never ordered it on another occasion; Miss McCoy convinced of result and gave her five or six strokes in the sleeping hall; I did not see the whipping, or the instrument used, but supposed it was a light rod; the girl was then shut in a room; five or ten minutes after the room was opened to get an apron, and the little girl was crying and seemed very angry; she said "telling her—and the school officer, too." She referred to me, I suppose, but I made no reply. That was the only severe case of whipping I knew of. Miss McCoy's treatment was very kind, generally. Never knew of Mrs. Avery whipping; knew him to visit the school once. Think the general treatment is for good, in an eminent degree. I have classes that have advanced scholars; am in the second division. Know of no case of cruel treatment, or neglect; since I have been here.

To Mr. Plummer—Mr. Avery visited my school but once. Miss McCoy has supervision; she does not visit the school every day.

To Mr. Gill—I have no means of knowing anything; have no knowledge of any cases. Do not know of any reason before I entered the school, of the demoralization. A change of teachers and matrons affect the whole schools. It might occasionally happen that girls are out of their rooms one hour and a half hours. In my mind, that would not account for demoralization. It would tend to confusion; but not to the extent that there was. It ought to be restored. I did not expect to find a model school here. I had heard that Miss Dickey had been there for some time. I came on one month's trial. Insolence to an officer is extreme insolence. Don't know Lucinda Jones; she often gave me insolence; she was punished for it; she was locked in the room about a week; she may have received more bread and water—but she got coffee and food from the officers' table at times. The girls are not nearly so good as the average in the public schools; they are punished every time that they are bad; do not think I was ever told not to punish, but it was not customary for teachers to punish.

Mr. Swartzwelder—You have read in the good book, I suppose, "Whom the Lord loveth he chasteneth."

Mr. Gill—But not with the rod.

Mr. Swartzwelder—No; but by the small-pox, typhoid fever and such like agencies.

Cross-examined by Mr. Gill—The whipping in the sleeping hall; there was recalled to testify about the mouse. She had never seen a mouse in the food, but had heard of it.

To Mr. Thornton—There is the greatest possible change in the school since I took charge of it.

STATEMENT OF MRS. MILLER.

Mrs. A. Miller sworn—Came here 14th September, 1874; am now in sewing room; was about two months in the laundry. [Detailed the girls' duties.] Never knew Miss Kelvy to whip, or even scold a girl. On one occasion, Miss McCoy being absent, I reported one of the girls to Mr. Avery; he came down and lectured them. Have seen girls sitting in the sewing room, and on all occasions for punishment for me to whip them; have seen the whip, but the whippings were in the hall, and I never stood and saw it done. The instrument is what I call a cowhide: it is about so long (marking about two feet); never saw any mark's but in Lucinda Jones' case—Lucinda she came to me, but I was busy and thought the marks were only from whipping; learned these had been whipped, about that time, but the room was dark, and I merely said "yes," and dismissed the matter; my impression at the time was, that it was a stain from perspiration; afterwards I knew of her being whipped, and now think the marks were from whipping.

To Mr. Thornton—This girl was whipped after Miss Kelly came; think Miss Kelly and Miss Holler came at the same time; think Lucinda showed the marks to Miss Holler.

To Mr. Swartzwelder—The general tendency of Miss McCoy was towards leniency; she is not quick tempered, cruel or harsh: Mr. Avery is very kindly in his disposition. Heard of no case where a girl had fainted, but do not know anything about it; understood the girl had fainted.

Remember when the officers met with Mr. Avery, for consultation; it was in the fall; Mr. Avery used no such language about blasting the reputation of any one who proved disloyal to the institution. He said he had understood from Miss McCoy that there was a want of harmony among the officers; urged them to be harmonious, that they might discipline themselves; said he had applicants for positions, frequently; that he had been asked as to girls, for recommendations, and said he would giving recommendations unless it would be a good one; there was nothing offensive in the lecture, and my impression from the whole, was this—that if Miss McCoy had had a little more tact, was a little more patience, the lecture might have been avoided. I say, in all honesty, that there was nothing whatever said about blasting reputation.

To Mr. Thornton—The whippings might occur two or three days in succession; then there might be one, two or even three weeks without whipping. Never knew of a case of whipping disproportioned to the offense, or that I thought was not deserved. In one case, I thought the wrong girl had been punished, on that ——'s a mere presumption on my part. The whipping was not at all severe.

To Mr. Swartzwelder—I never called a girl a trollop, a bastard thing, or any name like it. Never heard of officers striking girls with keys or slapping them in the face. Know Miss Pence.

Mr. Swartzwelder—Were Mrs. McKelvy and Miss Dickey peculiarly intimate?

Witness—Excuse me, Mr. Swartzwelder, I am here to answer about things in the house.

Mr. Swartzwelder—Well, that will make any difference to me; I will not press the question.

To Mr. Swartzwelder—The general fault of the girls is obstinate insubordination; some of the girls gave no punishment at all; Tillie Merriman was around among the other girls before she took sick; remember of her being flushed; do not know that she went directly to the infirmary; know of one case of a girl being reported sick, that I ought to have reported; it was reported on the same day, however; I forgot it, for the moment, and another officer reported the case; I made the remark, at the time, that I should have reported that case.

To Mr. Gill—The rules were never placed in my hands, but I was told about my duties; knew about the girls being graded; cannot remember the number of times Mr. Avery has "held court;" every girl is supposed to be in grade. Did not see Mr. Avery every day in the rooms; know he was about every week. Do not know of girls being whipped for talking. Some of the girls you may be able to confide in, but not in the mass. Saw one girl slapped on the back, but none on the face or head. Have heard girls cry out, "O, Miss McCoy, I will never do it again," or something like that. Have heard of girls being locked up longer than a week; never four weeks or four months. Cannot recall all that Mr. Avery said at the interview referred to; but am sure that I could not give a good recommendation, he would not ask it.

Mr. Findley—Was there any one asking for a recommendation at that time?

Witness—No, sir.

Mr. Gill—Do you know what induced Miss McCoy to complain to Mr. Avery?

Witness—Nothing more than what I have said.

Mr. Thornton—What was the cause of the want of harmony?

Witness—I do not know.

Mr. Findley—Did you subsequently learn the purpose for which the officers had been called together?

Witness—I thought when I was called in, that I had lost a key, or something of that kind.

To Mr. Swartzwelder—I never, never, never called a girl a "thief" or "liar." I do not remember of saying that I would not sit on the same seat that any of the girls sat on—there are some of the girls in the house that I would not care to use. As to the spoon story, there were some old plated spoons, that had turned green, and they had been brought so repeatedly that I took three of them and threw them to one side—but not across the room to the stove.

The committee then adjourned to meet at half-past nine o'clock this morning, at the same place.

THE OHIO RIVER

Public Meeting to Consider Improvements—New Plan Proposed by John F. Bennett, Esq.—An Investigation of the Method Asked—Resolutions Opposed to Dams and Chutes.

The public meeting called by the President of the Chamber of Commerce, on the interest of the Ohio river improvement, was held yesterday afternoon at the rooms of the chamber, and turned out to be a rather mixed gathering. The opposition to the proposed improvement, composed of engineers and men, appeared to be largely in the majority, and the presence of a large number of laborers was notable. In whose or what interest they attended, did not develope itself.

The meeting was called to order by Hon. Thos. M. Howe, President of the Chamber of Commerce, who said that he had called the meeting of friends of improvement at the instance of a number of prominent citizens. It was his duty now to preside over the meeting organized and the business was in their hands. An organization was now in order.

John F. Dravo, Esq., nominated Mr. Simpson Horner for chairman. Mr. Horner declined.

Mr. George Miller nominated John F. Dravo, Esq., but he also declined.

Mr. Dravo nominated Joseph Dilworth, Esq., and that gentleman was unanimously chosen.

Mr. Dilworth on taking the chair called for election of secretaries.

On motion of Mr. Thos. Jones members of the press were made secretaries.

Mr. Dilworth read the call for the meeting and letters from gentlemen who were offered.

Mr. Dravo said there are a variety of plans for the improvement of the river. It was proper that information be had and the views of gentlemen present be heard on them. A gentleman present, Mr. John F. Bennett, had recently informed the speaker of a new plan, which, if feasible, would be of great importance. He asked that Mr. Bennett be heard upon the subject. Upon this call Mr. Bennett presented the following, which was read:

Plan for Permanently Improving the Ohio River.

In the year 1852, I bored for salt water on the south bank of the Ohio river, about midway between the hills that make the valley bottom of the Monongahela, the valley at this place being 2,640 feet wide, from hill to hill-side, and the river (a slackwater, one mile above first dam) measuring 1,100 feet.

FIRST SALT WATER FOUND.

I began by sinking a shaft 6 feet in diameter through sand and gravel down to the level of the river at low water; then I bored and drove a six inch iron pipe through sand and gravel 90 feet until it reached the rock bed of the original Monongahela Valley. Salt water became aware that the present Monongahela river courses on the top of the sand and gravel bed of the ancient valley course, and that the sand and gravel beneath the level of the present river at low water was at least 50 feet in depth.

Later experience at Cincinnati in sinking foundations for bridge piers proved that below the sand and gravel underneath the level of the river at low water there is about 100 feet of rock, more or less expected as the contracts is that the sand and gravel underneath the level of the river at low water there is about 150 feet of rock, more or less, expected that when these water courses were originally formed, the floods of water scooped out the valleys to one continually descending trough, beginning with the smaller streams and ending with the waters of the Monongahela and Allegheny rivers, carrying them out clear of the gradually descending grade, and leaving in time 100 feet of sand and gravel as at present; deepening the trough as the streams became larger, causing a greater area of labrading force, and in unite at Pittsburg the valley bottom has been worn out a width of 2,640 feet, carrying from each hillside in regular form of the segment of a circle, about 1,320 feet, and giving it a depth of about 150 feet from the middle of the chord of the arc to the center of the arc, out of which the old river bed and the present river has washed and worked its course, cutting out lower and lower at the at highest water, level with the bank, and at lowest water (or no water) about 45 feet below the bank of the river, as it is at present.

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Later experience at Cincinnati in sinking foundations for bridge piers proved that below the sand and gravel underneath the level of the river at low water there is about 100 feet of rock, more or less, expected as the contracts is that the sand and gravel underneath the level of the river at low water there is about 150 feet of rock, more or less, expected that when these water courses were originally formed, the floods of water scooped out the valleys to one continually descending trough, beginning with the smaller streams and ending with the waters of the Monongahela and Allegheny rivers, carrying them out clear of the gradually descending grade, and leaving in time 100 feet of sand and gravel as at present; deepening the trough as the streams became larger, causing a greater area of labrading force, and in unite at Pittsburg the valley bottom has been worn out a width of 2,640 feet, carrying from each hillside in regular form of the segment of a circle, about 1,320 feet, and giving it a depth of about 150 feet from the middle of the chord of the arc to the center of the arc, out of which the old river bed and the present river has washed and worked its course, cutting out lower and lower at the at highest water, level with the bank, and at lowest water (or no water) about 45 feet below the bank of the river, as it is at present indicated by the low water river channel.

SALT WATER AT LOW WATER LEVEL.

Such a wall or dam so built will compel this underground flowing water to rise to the level of the top of the dam and flow into the present river bed, and this, not only at the wall but everywhere all along the pool between each wall or dam, dividing the river into pools with six to eight feet depth of water above their present level, and with corresponding width; communicating with each other by the gate or opening in each wall or dam: and thus at low water having very little current in each wide pool, increased to a gentle current of about two miles an hour as it passes through the gate or opening into each lower pool.

I wish particularly to call your attention to the manner in which this underground flowing water will rise to the surface in the pool above the wall or dam, namely, that being stopped by the dam, it will flow into the present water course or river, from the sand and gravel that form the present sides of the river, and also it will flow, rising upwards from the bottom of the present river, as it is now, and certainly in the Ohio river below Louisville when a flood is passing down stream, and which, while passing, has given up part of its water to the sand and gravel in the bottom and sides of the river, and when the flood in the river begins to fall, receives back from the sand and gravel at its sides the water that had flowed thither, as also, under the law of liquids which press on all sides alike, receives water from the sand and gravel which forms the bottom or bed of the river; and in such quantity and with such force, as to wash up sand frequently, amongst the gravel on the bottom of the river, that during the time occupied in passing through the pool, it will cause banks of sand to accumulate to a thickness of 3 to 7 feet.

SAND GRAVEL BELOW WATER LEVEL.

I measured on the map the width of the valleys of the Monongahela and Ohio, including streams and ascertained there was a quantity or superficial area of 76,800 square miles at low water, equal in bulk to 20,105,672,000 cubic feet. I ascertained by experiment that a vessel containing dry sand and gravel, after that in the bed of the river, well shaken together, would contain one-third less than in the river: therefore I concluded that there was in the beds of the Monongahela river and its feeders a reserve capacity of 13,403,781,333 cubic miles of ten feet deep, namely, 10,052,221,000 cubic feet.

QUANTITY OF WATER UNDER RIVER BED.

By the same calculation the Allegheny valley has a reservoir of water of forty-six square miles of ten feet deep, or 460 square miles, giving a reserve of eighty-two square miles of ten feet deep, or 3,580,800,000 cubic feet of water. This is 4.19 per cent. of the total yearly river discharge, or equal to twelve days' average discharge of the Allegheny.

By my measurement, from the foot of Squirrel Hill, in the Twenty-third ward of the city of Pittsburgh, on the south side of the river opposite side of the river, near the mouth of Beck's run (the place of commencement of the valley of the Monongahela bottom land is 2,600 feet, of which the present stream of water occupies 1,100 feet, the present first dam is 1,100 feet, the average depth of water in the present stage of water is six feet, and consequently the superficial area of the current of the water is 6,600 square feet. By my measurement the deepest part of the original bed of the river is fifty feet below the level of the river at this stage of water, and the average depth may be taken at thirty feet, which, multiplied by 2,600 feet, the width of the valley, gives 78,000 feet of superficial area in section, and deducting 6,600 feet of water, leaves 71,400 feet of superficial area in section of sand and gravel below the level of the surface of the river, and dividing this 71,400 feet by three, we have 23,800 superficial feet of water in section, in sand and gravel. Assuming that the Allegheny river to give the same proportions, we have 35,800 plus the 29 river-cuts, equals 36,700 superficial feet in the Allegheny river, together making a superficial area of 60,500 feet of sand and gravel in the bottom of the two rivers below the low water level, where they join together to form the Ohio river. This, multiplied by the same superficial area of sand and gravel in a cross section of the whole valley of the bed of the Ohio river at low water of 163,500 superficial feet; or the valley to be about 3,500 feet wide, from hill to hill, with an average depth of 46 feet, and which, I believe, is very nearly the true measurement.

STORAGE OF UNDERGROUND WATER.

In order to estimate the rate of flowage of this underground water, I experimented on the water flowing amongst sand and gravel placed in a wooden chute slightly elevated at one end, and caused the water to flow through it, and ground water docs flow at the rate of 83 yards per hour, or one mile in 21 hours. By calculation, there are 5,860 feet in length of section flowing 83 yards per hour, gives 14,338,000 cubic feet per hour, or 344,232,000 per day, and would require 60 days to supply the sand and gravel reservoir, supposing the water in this reservoir should receive no increase from rainfall, or from springs, during the 65 days.

This quantity of water, if passing through a gate or opening of 100 feet wide, flowing at the rate of two miles an hour, would give a depth of 6.8 feet.

OF UNDERGROUND DAM PROPOSED.

I propose that the navigation of the Ohio river be improved by building dams across the valley from hillside to hillside, having their foundations on the original river bed, to be built of stone connected together so as to be impervious to water, and brought up to a height of six or eight feet above the present level of the river at low water, leaving a gate or opening in such dams or walls of two hundred feet in width, at the place in each dam or wall as is at present indicated by the low water river channel.

Such a wall or dam so built will compel this underground flowing water to rise to the level of the top of the dam and flow into the present river bed, and this, not only at the wall but everywhere all along the pool between each wall or dam, dividing the river into pools with six to eight feet depth of water above their present level, and with corresponding width; communicating with each other by the gate or opening in each wall or dam: and thus at low water having very little current in each wide pool, increased to a gentle current of about two miles an hour as it passes through the gate or opening into each lower pool.

I wish particularly to call your attention to the manner in which this underground flowing water will rise to the surface in the pool above the wall or dam, namely, that being stopped by the dam, it will flow into the present water course or river, from the sand and gravel that form the present sides of the river, and also it will flow, rising upwards from the bottom of the present river, as it is now, and certainly in the Ohio river below Louisville when a flood is passing down stream, and which, while passing, has given up part of its water to the sand and gravel in the bottom and sides of the river, and when the flood in the river begins to fall, receives back from the sand and gravel at its sides the water that had flowed thither, as also, under the law of liquids which press on all sides alike, receives water from the sand and gravel which forms the bottom or bed of the river; and in such quantity and with such force, as to wash up sand frequently, amongst the gravel on the bottom of the river, that during the time occupied in passing through the pool, it will cause banks of sand to accumulate to a thickness of 3 to 7 feet.

SAND GRAVEL BELOW WATER LEVEL.

I measured on the map the width of the valleys of the Monongahela and Ohio, including streams and ascertained there was a quantity or superficial area of 76,800 square miles at low water, equal in bulk to 20,105,672,000 cubic feet. I ascertained by experiment that a vessel containing dry sand and gravel, after that in the bed of the river, well shaken together, would contain one-third less than in the river: therefore I concluded that there was in the beds of the Monongahela river and its feeders a reserve capacity of 13,403,781,333 cubic miles of ten feet deep, namely, 10,052,221,000 cubic feet.

QUANTITY OF WATER UNDER RIVER BED.

By the same calculation the Allegheny valley has a reservoir of water of forty-six square miles of ten feet deep, or 460 square miles, giving a reserve of eighty-two square miles of ten feet deep, or 3,580,800,000 cubic feet of water. This is 4.19 per cent. of the total yearly river discharge, or equal to twelve days' average discharge of the Allegheny.

By my measurement, from the foot of Squirrel Hill, in the Twenty-third ward of the city of Pittsburgh, on the south side of the river opposite side of the river, near the mouth of Beck's run (the place of commencement of the valley of the Monongahela bottom land is 2,600 feet, of which the present stream of water occupies 1,100 feet, the present first dam is 1,100 feet, the average depth of water in the present stage of water is six feet, and consequently the superficial area of the current of the water is 6,600 square feet. By my measurement the deepest part of the original bed of the river is fifty feet below the level of the river at this stage of water, and the average depth may be taken at thirty feet, which, multiplied by 2,600 feet, the width of the valley, gives 78,000 feet of superficial area in section, and deducting 6,600 feet of water, leaves 71,400 feet of superficial area in section of sand and gravel below the level of the surface of the river, and dividing this 71,400 feet by three, we have 23,800 superficial feet of water in section, in sand and gravel. Assuming that the Allegheny river to give the same proportions, we have 35,800 plus the 29 river-cuts, equals 36,700 superficial feet in the Allegheny river, together making a superficial area of 60,500 feet of sand and gravel in the bottom of the two rivers below the low water level, where they join together to form the Ohio river. This, multiplied by the same superficial area of sand and gravel in a cross section of the whole valley of the bed of the Ohio river at low water of 163,500 superficial feet; or the valley to be about 3,500 feet wide, from hill to hill, with an average depth of 46 feet, and which, I believe, is very nearly the true measurement.

STORAGE OF UNDERGROUND WATER.

In order to estimate the rate of flowage of this underground water, I experimented on the water flowing amongst sand and gravel placed in a wooden chute slightly elevated at one end, and caused the water to flow through it, and ground water docs flow at the rate of 83 yards per hour, or one mile in 21 hours. By calculation, there are 5,860 feet in length of section flowing 83 yards per hour, gives 14,338,000 cubic feet per hour, or 344,232,000 per day, and would require 60 days to supply the sand and gravel reservoir, supposing the water in this reservoir should receive no increase from rainfall, or from springs, during the 65 days.

This quantity of water, if passing through a gate or opening of 100 feet wide, flowing at the rate of two miles an hour, would give a depth of 6.8 feet.

OF UNDERGROUND DAM PROPOSED.

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Such a wall or dam so built will compel this underground